

# American Artisan

Founded 1880

The Warm Air Heating and Sheet Metal Journal

Vol. 97, No. 19

CHICAGO, MAY 11, 1929

\$2.00 Per Year



## When a Man Builds

**WATERBURY**  
**SEAMLESS FURNACE**  
REG. U.S. PAT. OFF. PIPE OR PIPELESS

### —or Remodels His Home

he gets the dope on the latest improvements. Everything must be new, modern, better.

What kind of furnace will be easier to sell him—one that is 20 years behind the times or a 1929 gas-tight Seamless Steel Furnace, with a quick "pick-up", automatic, controlled humidity and economical performance?

You know the answer! And so does every Waterbury Dealer, who has proved, by steadily increasing

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A Waterbury Agency places you above price competition. It places you in a position to get the most profitable installations. It opens up a new opportunity to meet today's demands and conditions. It brings you the greater rewards that always go to the man who keeps pace with progress. Write for the Waterbury Agency proposition.

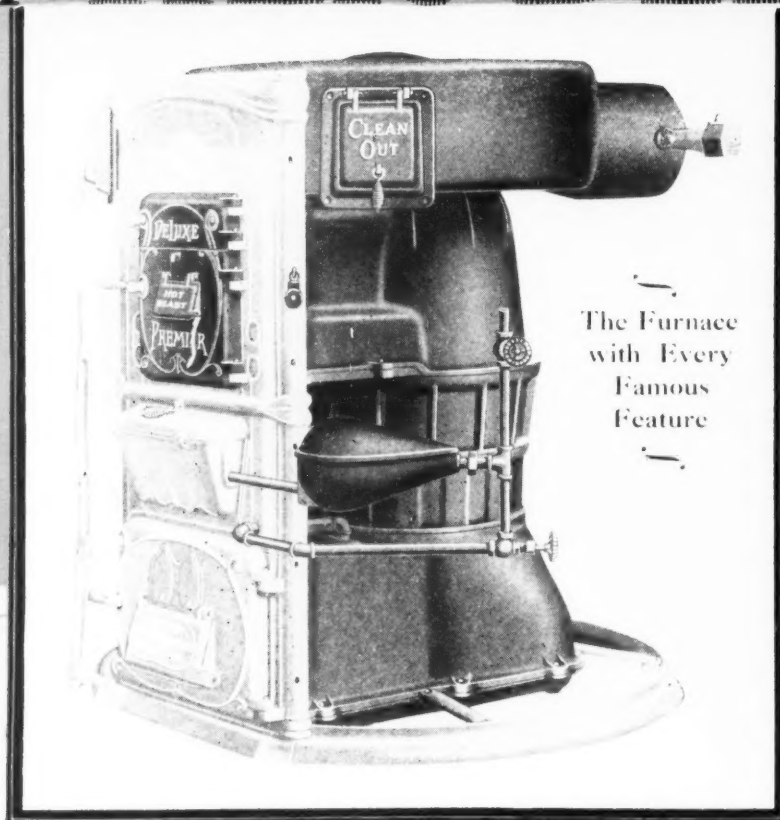
**The Waterman-Waterbury Co.**

1122 Jackson St. N. E.

Minneapolis, Minn.

*Complete stocks carried in Philadelphia, Pittsburgh, Albany, New Orleans,  
Kansas City, Denver, San Francisco, Seattle*

# PREMIER • DELUXE



The Furnace  
with Every  
Famous  
Feature

The fifth of a series of twelve advertisements to appear on this page.

Don't kid yourself about  
**cut-prices**

A GREAT many foolish furnace dealers and manufacturers are kidding themselves into thinking the only way to sell more furnaces and to make more profits is to cut prices and undersell the other fellow. BARNUM was right! There is one of this kind born every minute. PREMIER Dealers don't have to worry about the other fellow underbidding them. Why should they? Selling at the same old price level.

they are making more money than ever before and, as time goes on, they will make even more.

PREMIER Dealers are handling a furnace that commands a good price at retail. They are using a merchandising service that ticks off sales as steadily as an Elgin ticks off the seconds.

IF YOU are tired of chasing your tail and are looking for a way out, we would like to present to you a safe and sane plan for making money by selling Premier DeLuxe Heaters. There's no magic about it. It takes a lot of hard work, but the reward is well worth the work. Ask any Premier Dealer.

LET US know when and where our man can see you. You will not be obligating yourself whatsoever by asking to look over the plan.

Ask to have the Premier Pictorial mailed to you that snappy, scrappy little publication issued monthly. Free—no obligation.

**PREMIER WARM AIR HEATER Co., DOWAGIAC, MICH.**

**PREMIER  
DE LUXE  
HEALTHY  
HUMID  
HEAT**





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ood  
off

out,  
king  
out  
the

not  
plan.

CH.



# The Doctor's Responsibility ... and YOURS

**"DON'T** wait until serious trouble strikes—*keep the patient healthy.*" That's the doctor's responsibility to-day—and your responsibility, too! Doctor of heating systems, examine your patients now—before winter breakdowns pile you high with work.

And here's a prescription for those cases where a heating system has run down beyond repair—a new Richardson & Boynton Co. heater! Fill that prescription and there will be no more trouble there for many years—nothing but clean, cheap, healthful heat.

There is new and untouched profit in "preventive medicine" for heating troubles—and there's no slack season for the man who uses it. Doctor, it's up to you!



**WE** believe in and are members of The National Warm Air Heating Association.

# Rx



RICHARDSON  
Pipeless Warm Air  
Heaters

*The Heating Doctor*

## RICHARDSON & BOYNTON CO.

Manufacturers of "Richardson" "Perfect" Heating and Cooking Apparatus Since 1837

260 Fifth Ave., New York, N. Y.

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NEW YORK UTICA NEWARK PHILADELPHIA BOSTON CHICAGO BUFFALO MINNEAPOLIS CINCINNATI DETROIT PROVIDENCE

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**WESTERN...WESTERN...WESTERN...**

**WESTERN...WESTERN..**

**WESTERN.**

# WESTERN

**Practical...Substantial  
Profitable**



**T**HE Western Steel Furnace is made by skilled workmen in our modern factory. Its construction is simple, practical, based on common sense heating. No frills on the Western—no unnecessary or experimental parts.

With the factory at the head of navigation on the Great Lakes, and the numerous distributors listed below, any section of the country is convenient Western territory.

Write for Catalog No. 16

**Western Steel Products Co.**  
Duluth, Minn.  
130 Commonwealth Ave.

Distributed by:  
Atlanta, Ga. .... Moncrief Furnace Company  
Kansas City .... Kansas City Furnace Co.  
Pittsburgh, Pa. .... Wagener-Proie Furnace Co.  
San Francisco, Pacific Sheet Metal & Furnace Co.

Cincinnati, Ohio. .... Niehaus Furnace Repair Co.  
Ravenna, Ohio. .... Ravenna Furnace Company  
Chicago-Western Steel & Products Co. ....  
..... 3025 W. Van Buren St.

**...WESTERN**

**WESTERN...WESTERN**

**WESTERN...WESTERN...WESTERN**



# Are You Speculating With Your Future?

**S**OME few get rich by speculating, but most lose. For more certain profit invest in preferred—safe securities.

You have the same choice in furnaces, but why speculate when you can sell "AFCO" Preferred Boiler Plate Furnaces? They will help you build a permanently successful business and earn a fair profit on every job.

The full facts are contained in the "AFCO" Guide to Furnace Profits—send for it now—there is no obligation.



**American Furnace Co.—St. Louis, Mo.**

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## THE FIREPOT



**T**HE Caloric Double-ribbed Cast Iron Firepot is an extra heavy and rugged casting. The double-ribbed construction gives it wonderful strength and durability. The inside ribs act just the same as hot blast slots holding the fuel away from the wall of the pot enough to allow any currents to pass up alongside the wall of the pot without the possibility of clogging with ashes as is sometimes the case with slots. The outside ribs provide a great increase in radiating surface and help increase the entire furnace efficiency.

This same design fire pot can be furnished in either one or two piece type.

MONITOR-CALORIC DIVISION  
MARSHALL FURNACE CO.  
MARSHALL, MICHIGAN

Write for catalog and dealer proposition

Repairs for all old model Monitor products



# WISE

## FURNACES

### 3 high quality types

—Enabling you to confine all your furnace purchases to one source. Write for Catalog No. 23 today



WISE  
OPEN DOME  
CAST FURNACE

BOTH the Open Dome and the Wise 20 Series have a new Cellular Firepot. It is One-piece and extra heavy. The Open Dome also has a new Elbow Shaped Flue Collar on the inside, turned up so all the heat must follow the castings to the top.

The 20 Series, besides having the newly designed Cellular firepot, has a new Patented Radiator. The feed chamber and the top of the radiator are constructed so as to allow communication between them which brings the opening of the fire flues



NEW  
WISE



WISE  
20 SERIES  
CAST FURNACE

of the radiator directly into the feed chamber, making the flues readily accessible for cleaning through upper feed door.

The Wise Steel Furnace is not just another steel furnace but one having exclusive features. The bottom of the radiator has a Cast Iron Soot Box and Clean - Out. The Wise Steel Furnace is both riveted and welded and has special design grates.

It is a steel furnace that you will instantly recognize as having WISE quality and distinctiveness.

**STEEL FURNACE**

**The WISE FURNACE COMPANY . . . AKRON, OHIO**



## The AUERISTOCRAT

of all registers, combining air capacity, decorative and concealing features.

Designed to conform with the Standard Code so they fit all standard boxes.

Auer Patented mechanical features make it perfect in operation,—quick and easy to install.

*Auer's Save Hours and Dollars*

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Cleveland, Ohio

Established 1902



## CHICAGO

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**KNOW** how good furnace pipe can be—write for details and prices today.

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**THE CLEVELAND CASTINGS PATTERN COMPANY**  
CLEVELAND, OHIO

**PATTERNS**

**FOR STOVES AND HEATERS** FIRST-CLASS IN WOOD and IRON

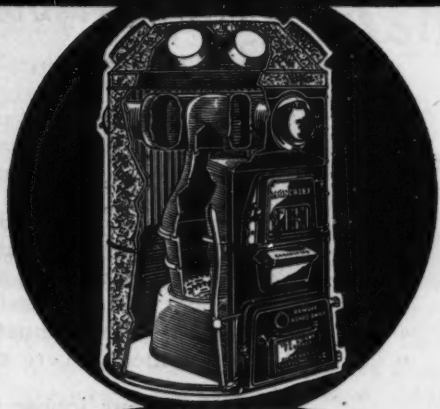
**VEDDER PATTERN WORKS** ESTABLISHED 1893 **TROY, N. Y.**

**IRON AND WOOD**

## STOVE PATTERNS

**QUINCY PATTERN COMPANY**  
QUINCY, ILLINOIS

# MONCRIEF FURNACES



FINISHED IN AUTUMN RED

## Right in Step With Progress

**T**HIS, Mr. Dealer, is 1929, and if you are going to do business profitably, you have got to do two things:

1. Sell an up-to-date furnace like the Series "C" Moncrief, with all the modern improvements in design and construction, and finished in color to catch the eye of the modern woman.
2. Install your jobs according to the Standard Code.

The Moncrief Line and the Moncrief Proposition will put you right in step with progress. The particulars are yours for the asking.

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3471 E. 49th St. Cleveland, Ohio

We supply everything used  
on a warm air heating job

#### Distributors:

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August Bery & Son, Mack Ave. at Drexel, Detroit.  
The Henry Furnace & Foundry Co., Pittsburgh, Pa.  
Frontier Water & Steam Supply Co., 366 Oak St.—  
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Johnson Furnace Co., Kansas City, Mo.  
E. A. Higgins, 1112 Douglas St., Omaha, Neb.  
Moncrief Furnace & Mfg. Co., Dallas, Texas.  
E. W. Burbank Seed Co., 29 Free St., Portland, Me.  
J. F. Conant, Ry. Term. Warehouse, Troy, N. Y.  
Wilkes-Barre Hdwe. & Stove Co., 18-20 So. Washington St., Wilkes-Barre, Pa.  
The Crawford Heating Co., Steubenville, Ohio.  
**EASTERN OFFICE**  
Room 1306, 11 W. 42nd St., New York City.  
E. L. Garner, Manager.

## A REAL TEST

Complete Control  
with only the  
Hot Blast Damper

Hot Blast in the Florence really means something—smoke, gases and soot are all consumed and the cheapest grade of fuel may be used with resulting more heat than other furnaces deliver with high priced fuel. The Florence is a money maker and business builder—interested dealers are requested to write at once.

OPEN DOME and RADIATOR MODELS



## "FLORENCE"

...a real HOT BLAST!

C. EMRICH CO. (Since 1861) COLUMBUS, OHIO

Manufacturers also of the famous Florence  
Hot Blast Heater, Supreme Florence Circu-  
lator, Florence Cook Stoves and Ranges.

MAIL THIS COUPON for CATALOG and PRICES

NAME .....

ADDRESS .....

CITY .....

STATE ..... A. A. 5-11

When writing mention AMERICAN ARTISAN—Thank you!



# Prominent Furnace Manufacturer recommends and sells the ROBINSON Heat Distributor

THE boys who install warm air heating systems up around Duluth have to engineer jobs that will heat satisfactorily in very cold weather.

Mr. Colburn says the Robinson Heat Distributor is doing good work and that means it is successful in a region where it must undergo its most severe test.

Ask your jobber for full details on the Robinson Heat Distributor.

FURNACE showroom of the Western Steel Products Co., Duluth, Minn. Notice the prominent location given the Robinson Heat Distributor which is displayed installed in a Western Steel Furnace.

**WESTERN STEEL PRODUCTS CO.**  
*Manufacturers - Engineers*



Duluth  
MINNESOTA

April 18 th, 1929

A.H. Robinson Company  
Massillon, Ohio

Gentlemen;

We have used a number of your heat distributors in the past year, and have a old quite a goodly number to our trade. We take this opportunity of advising that we find this apparatus to be all it is claimed to be. It has served a purpose of correcting some poor installations, and we have yet the first complaint to find where this fan has been installed. We recommend this fan to any furnace installer who desires a medium priced furnace fan.

Yours very truly,

WESTERN STEEL PRODUCTS COMPANY  
*L.G. Colburn*  
Manager, Furnace Department

L.G. Colburn;CH



**ROBINSON**  
Heat Distributor

Mfg. by The A. H. ROBINSON CO., MASSILLON, OHIO

Recommended and sold by these reliable jobbers—Ask the one nearest you for details

BAKER-PAYNE-VOYE CO., Boston, Mass.  
THE BECKWITH CO., Dowagiac, Mich.  
CARR SUPPLY CO., Chicago, Ill.  
DAYTON-HESSLER CO., Syracuse, N. Y.  
DEMMLER BROS. CO., Pittsburgh, Pa.  
FARRIS FURNACE CO., Springfield, Ill.  
C. L. FEATHERSTONE FURNACE CO., Spokane, Wash.  
FOLLANSBEE BROTHERS CO., Pittsburgh, Rochester, Cincinnati, Memphis, Detroit, Indianapolis, Milwaukee, Louisville.  
FLORAL CITY HEATER CO., Monroe, Mich.  
FOX FURNACE CO., Elyria, Ohio  
HEATING & SUPPLY CO., Pittsburgh, Pa.  
HENRY FURNACE & FOUNDRY CO., Cleveland, O.; Indianapolis, Ind.; Pittsburgh, Pa.

M. K. HOKE, Manheim, Pa.  
HOMER FURNACE CO., Coldwater, Mich.  
IDEAL FURNACE CO., Detroit, Mich.  
KELLEY-HOW-THOMSON CO., Duluth, Minn.  
W. E. LAMNECK CO., Columbus, Ohio  
LENNOX FURNACE CO., Inc., Syracuse, N.Y.  
LENNOX FURNACE CO. OF CANADA, LTD., Toronto, Ontario & Winnipeg, Man.  
THE MAJESTIC CO., Huntington, Ind.  
MAY-FIEBEGGER CO., Newark, O.; Akron, O.  
MIDLAND FURNACE CO., Columbus, Ohio  
MONCRIEF FURNACE CO., Atlanta, Ga.  
NEW IDEA FURNACES, LTD., Ingersoll, Ont., Can.

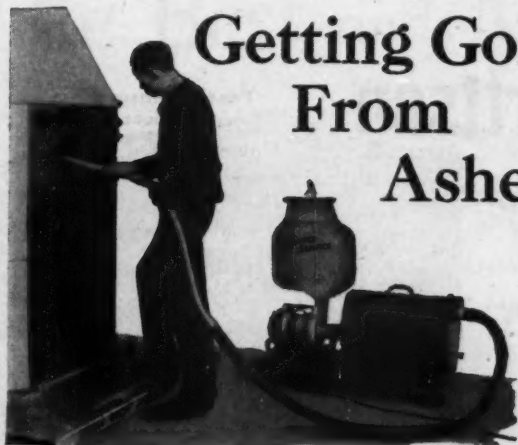
THE OHIO SHEET METAL & MFG. CO., Dayton, Ohio  
J. M. & L. A. OSBORN CO., Cleveland, O.; Buffalo, N. Y.  
PEASE FOUNDRY CO., Ltd., Toronto, Ontario, Canada  
PENINSULAR STOVE CO., Detroit, Mich.  
PORTLAND STOVE FOUNDRY CO., Portland, Maine  
RICHARDSON & BOYNTON CO., New York, Chicago, Boston, Philadelphia, Buffalo, Minneapolis, Newark, N. J.  
THE SCHILL BROS. CO., Crestline, O.  
WESTERN STEEL PRODUCTS CO., Duluth, Minn.  
GEO. F. WHEELOCK CO., Birmingham, Ala.  
WISE FURNACE CO., Akron, Ohio

Mention AMERICAN ARTISAN in your reply—Thank you!





## Getting Gold From Ashes



**F**URNACE cleaning with a Super Service is speedy; one man easily does four or five jobs to one handled by slow, old-time methods.

Repair work cries for attention in every basement. One dealer—Super Service equipped—used 30 repair men all last summer.

He sold a lot of new furnaces, too; saw where they needed them ahead of the other fellow.

*Write today for details and terms*

**The National Super Service Company**  
816 Lafayette Street Toledo, Ohio

## OPPORTUNITY

**O**NE of the largest manufacturers of warm air furnaces and heating equipment desires the services of one or two wideawake men to take charge of direct factory branches in Ohio, Ill., Ind., and Western Pennsylvania towns. A substantial salary, and profit sharing arrangement. The merchandise is well and favorably known.

Unusual co-operation will be given, intending that the man dominate the heating business in the town in which he is located. The man chosen will be given full charge of that entire branch. He will be able to present a service to the home owner or builder, for a complete heating plant direct from the factory.

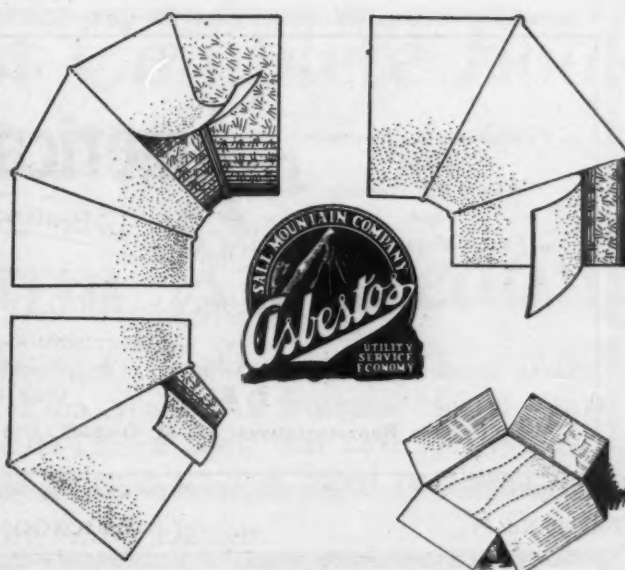
This is an exceptional opportunity for a reliable and energetic man. Heating experience is necessary. This would warrant attention of one now engaged in the heating business with limited capital, or an unsatisfactory line, who feels he could do bigger things with the proper backing.

If you can visualize the possibilities and believe you are the man that we want, write us for our general questionnaire and application blank. This blank properly filled out will give us the necessary information about yourself, and allow us to become better acquainted. All replies will be held in strict confidence.

Address

(L. L. S.)

337 W. Fifth St. Cincinnati, Ohio



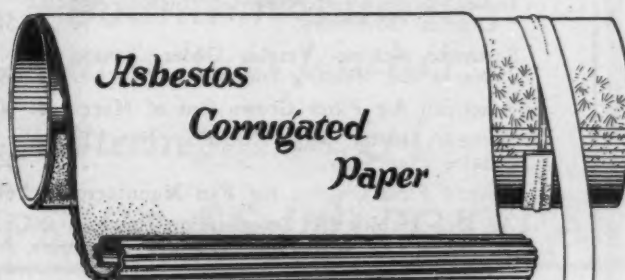
## Asbestos Elbow Sheets



**T**HESE handy asbestos die-cut elbow segments almost fly into place, neatly covering the elbow.

You save labor, fuss, time and money when you use Sal-Mo Asbestos Elbow Sheets. They come packed flat, 100 sets to the carton, or rolled in tubes, containing 25 sets for 8 inch, 9 inch, 10 inch and 12 inch elbows.

Used by up-to-date installers, who know it costs more to make their own.



## Asbestos Pipe Joint Tape

**J**OB with SAL-MO CORRUGATED PAPER on the pipes, ready-cut ASBESTOS SEGMENTS on all fittings and SAL-MO PIPE-JOINT TAPE on all joints, will have a lower cost of installation and operation.

**SAVES TIME, MONEY AND MATERIAL**

Stocked by the **BEST** Wholesalers  
Used by the **BEST** Installers

**SALL MOUNTAIN COMPANY**

176 West Adams Street Chicago, Ill.

Also manufacturers of Asbestos Paper,  
Mill Board, Pipe Covering, etc.

SALL MOUNTAIN CO.,  
176 W. Adams St., Chicago, Ill.

Gentlemen:

Send me Free Samples of Pipe Joint Tape and Asbestos Elbow Segments.

Name .....

Address .....



Founded 1880

Published to Promote  
Better  
Warm Air Heating  
and  
Sheet Metal Work

# American Artisan

The Warm Air Heating and Sheet Metal Journal

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### JOY IN LIFE DEFINED

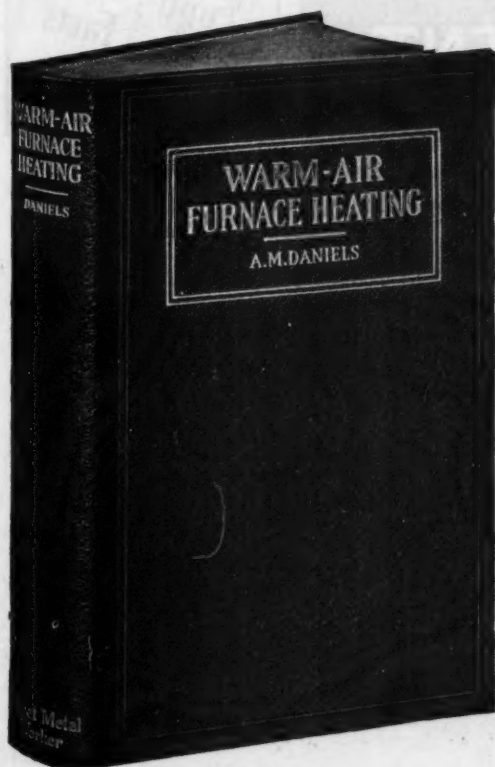
*A great deal of the joy of life consists in doing perfectly, or at least to the best of one's ability, everything which he attempts to do.*

*There is a sense of satisfaction, a pride in surveying such a work—a work which is rounded, full, exact, complete in all its parts—which the superficial man, who leaves his work in a slovenly, slipshod, half-finished condition, can never know.*

*It is this conscientious completeness which turns work into art. The smallest thing, well done, becomes artistic.—William Mathews.*



# The Best and Most Complete Book on Warm Air Heating



IT IS the book that thousands have been asking for—a book on Warm Air Furnace Heating that is UP-TO-DATE—a book that covers every phase of the subject giving exact data based on research work. Written by A. M. Daniels.

Here is the book that will enable both the experienced furnace man and the student to obtain a working knowledge of up-to-date scientific warm air furnace heating.

Read over the Chapter Headings—notice the complete treatment of the subject.

Many tables are included and some big labor savers in calculating pipe sizes—also many diagrams.

## Chapter Headings

1. Historical.
2. Typical Gravity Pipe Warm-Air Heating Systems.
3. Types of Warm-Air Furnaces.
4. Details of Furnace Construction.
5. Heat Losses.
6. Effect of Register-Air Temperature, Leader Area and Size of Wall Stack Upon Heating Effect Produced.
7. Insulating Coverings and Their Effect Upon Leader and Wall Stack Operation.
8. Casing Diameter vs. Furnace Capacity.
9. Air Supply to Furnace.
10. Furnace Capacity and Rating.
11. Register Grilles vs. Plant Capacity.
12. Chimneys and Flues.
13. Humidity.
14. Evaporating Pans.
15. Combination Heating Systems—Warm Air and Hot Water.
16. Gas Warm-Air Heating.
17. Oil-Burning Warm-Air Heating.
18. One-Pipe Furnace Heating Including Modifications.
19. Hot-Water Supply.
20. Leader Pipe Sizes.
21. Forced-Air Furnace Heating.
22. Coal as Fuel.
23. Pipe and Fittings.
24. Warm-Air Registers and Cold-Air Faces.

450 pages, 7x9 inches

Bound in semi-flexible  
imitation leather--

Stamped in gold--

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Send in your  
order today

AMERICAN ARTISAN,  
139 No. Clark Street, Chicago, Ill.

Enclosed find \$5.00 for which send me WARM AIR FURNACE HEATING by A. M. DANIELS.  
10% discount allowed on book and new or renewal subscription if ordered together.

Name.....

Street Number.....

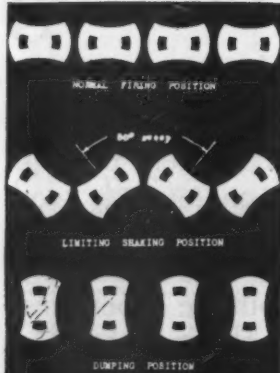
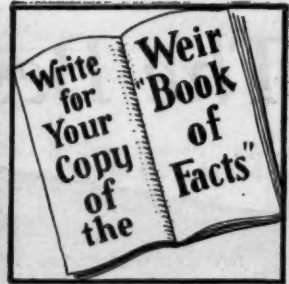
Town.....State.....

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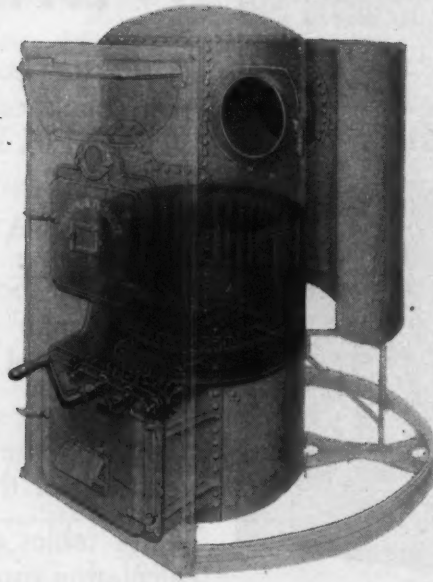


# NEW FOUR-BAR TYPE GRATES

## EXCLUSIVE WEIR PATENT



Handles  
any  
fuel—  
fine  
or  
coarse  
without  
waste  
yet  
shakes  
and  
dumps  
with  
utmost  
ease



**W**EIR dealers now have another *exclusive* feature to offer with the highest grade steel furnace made.

These new Four-Bar Type Grates are distinctly different from any and all other grates made.

Notice the drawings on the left which show first how the grates appear in normal firing position with small clearance between bars.

The second drawing shows that in shaking a maximum motion is effected without increasing space between bars.

The third drawing shows the dumping position which provides wide openings for completely clearing fire pot.

Note: Another feature of this grate is that bars are supported in the middle as well as both ends to guard against warping.

*The WEIR is also optionally equipped with Duplex Ball Bearing Grates and easy operating waist high shaker handle. We'd like to tell you more about the Weir grates and how they help you sell more high grade installations.*

**THE MEYER FURNACE CO.**  
**PEORIA-ILLINOIS**

**The  
Original  
Steel Furnace  
Now In Its  
Forty-Seventh  
Year**

# WEIR

**Made by  
The Founders  
of the  
Steel  
Furnace  
Industry**

Mention AMERICAN ARTISAN in your reply—Thank you!



# American Artisan

The Warm Air Heating and Sheet Metal Journal



Vol. 97

CHICAGO, MAY 11, 1929

No. 19

## Sheet Metal Contractors Seeking to Create Greater Stability in Their Industry

*Wish to Eliminate Bad Practices Now Believed to Prevail and Want Manufacturers Cooperation*

By GEORGE DUERR

THE TOTAL construction for the four months of 1929 ending April 30th is \$2,100,000,000, says A. E. Dickinson, president of a large firm in the construction field, adding this further note of observation, "More than ever before, construction is being planned with a view to permanency, artistic design and economy."

This calls to mind the fact that, in spite of the seeming even tenor of the construction, the sheet metal industry is not going ahead as rapidly as could be expected and contractors in that industry are today being confronted with a very serious situation which is greatly curtailing their activities. In fact, so grave has the circumstance become as to place the capital structure of their businesses in extreme jeopardy in many cases.

### Three Factors Working Against Expansion

On the one hand they appear to be having their markets materially narrowed by the encroachments of competitive industries.

Secondly, they are required, because of the seasonable nature of their business, to compete in the labor market for skilled labor at a time when they can do this to the least advantage to themselves.

Thirdly, they are being persecuted, it is alleged, by the manufacturer's practice of persisting in their determination to sell to all comers, regardless of whether they are lumber yards, carpenters, or owners,

and these sales, it is said, are made on the same basis that obtains between the manufacturer and contractor. Whether this last is true or not, the contractor believes it is anyway and is very much disgruntled about it.

*It is not desired in this article to create the impression that the manufacturer is alone to blame for conditions which obtain at the present time in the sheet metal industry. The contractor himself is engaging in practices which are having a dampening effect upon the natural expansion of the industry.*

*Therefore, if everyone along the line from the producer to the contractor will make an earnest, sincere effort to study ways and means of eliminating practices that have a detrimental effect upon the industry, the result will be to cut the fetters which now prevent healthy expansion.—THE EDITOR.*

### Sheet Metal a Prime Necessity in Industry

The sheet metal industry is a prime necessity in the scheme of things as constituted today. If it were not, it would have passed out of existence long since. Therefore contractors ask, why is it that some manufacturers will jeopardize legitimate profits in that industry by engaging in practices that are known

to be fundamentally unsound and are foredoomed to work a hardship upon the very man through whom it is hoped to find the largest markets?

The selling of sheets to the unskilled layman who in turn installs them himself or permits their installation by some person who is thoroughly unfamiliar with good practice, the contractor argues, not only takes work away from the legitimate contractor, but it results in the type of construction that can not give longevity of service and hence disgusts the customer with that standard of material.

Some contractors are prone to believe that the manufacturers feel that that is a desirable situation to create, since the more often the material gives out the more often it must be replaced. But it is hard to believe that any man capable of employing common sense cannot see the fallacy of such procedure. And since all are agreed that the satisfied customer is the most desirable thing in the world for an industry to have, why is it that greater effort is not put forth to secure the satisfied customer and multiply his number?

### The Right to Sell and Possible Hardship

To this the manufacturer will probably say that the sheet metal contractors in the territories where selling to lumber yards is being done are not aggressive enough and

(Continued on Page 65)



# Construction Pattern for Metal Marquee for Department Store Entrance

## Showing Another Application of Architectural Cornice Work

By O. W. KOTHE, Principal, St. Louis Technical Institute

THE MAKING of canopies over doorway entrances for stores, hotels, clubs, etc., is another application of architectural cornice work.

Marquees are made of two distinct types—one with a glass roof and the other with a solid ceiling, as we show in the accompanying drawing.

It will be observed that the canopy has a solid roof and an ornamental ceiling, and is used to shield the doorway entrance for a large department store. The base work for such canopies is structural steel; channel bars, as in detail "C," are run out from the building and they act as a cantilever beam. To overcome the plain crude effect of the channel bars, sheet copper is formed into mouldings and is wrapped around purely for decorative effect. The ornamental parts to them do not support anything.

The front of plan in our case is described from centers M-N-O, much the same as an offset is described for a pipe or gooseneck for rain spout. When the corners are established and the center projection is determined, then the offset geometry can be applied for locating the centers and describing of the outline. We should have mentioned the entire layout can be drawn to scale of a convenient size for practice. The ceiling section "A" should be put in to help work in the lines, which form panel or face miters in the central panels.

For practice it is well to draw the end elevations and the plan much as we show it, but in actual work only a sectional view as at "C" would be drawn full size, which would be used in developing the square corner miter patterns, as well as developing the curved members

of the front. It is always well to draw a full sized view of the curved lines of plan. This helps to assemble the several pieces and to hold the work to a proper line. But the detail "C" shows us how the metal is tied to the channel beam, as well as ceiling supports. Metal straps are riveted to the bottom and certain other places where convenient, and these are wrapped around structural members, which tie the metal moulds to the steel.

For the corners, only a square miter is needed, as we show developed. Often the entire stretch can be made in one piece from one width of sheet, and at other times longitudinal seams must be made at convenient places. To develop this miter, divide all curved members of the detail "C" in any number of equal parts, and with compasses pick each space separately, as 1-2-3-4-5, etc., from detail, and step off on a line as 1-4-. Draw stretchout lines, and from each point in the detail drop lines to cross stretchout lines of similar number lines. This establishes the points of intersection for drawing the miter cut line as shown. This miter is used on all four corners of the straight members. But for the curved ends the miters are cut while assembling.

Space here does not permit showing the development of the ceiling panel, but the panel part of section "A" is divided into equal parts; that is, the curved members and lines are projected through parallel to those shown until they reach the 45-degree miter lines on the ends. After this the pattern is developed by taking the girth from the ceiling part of "A" and stepping it off at right angles to the mould. Then draw stretchout lines, and then from all points in miters project lines to

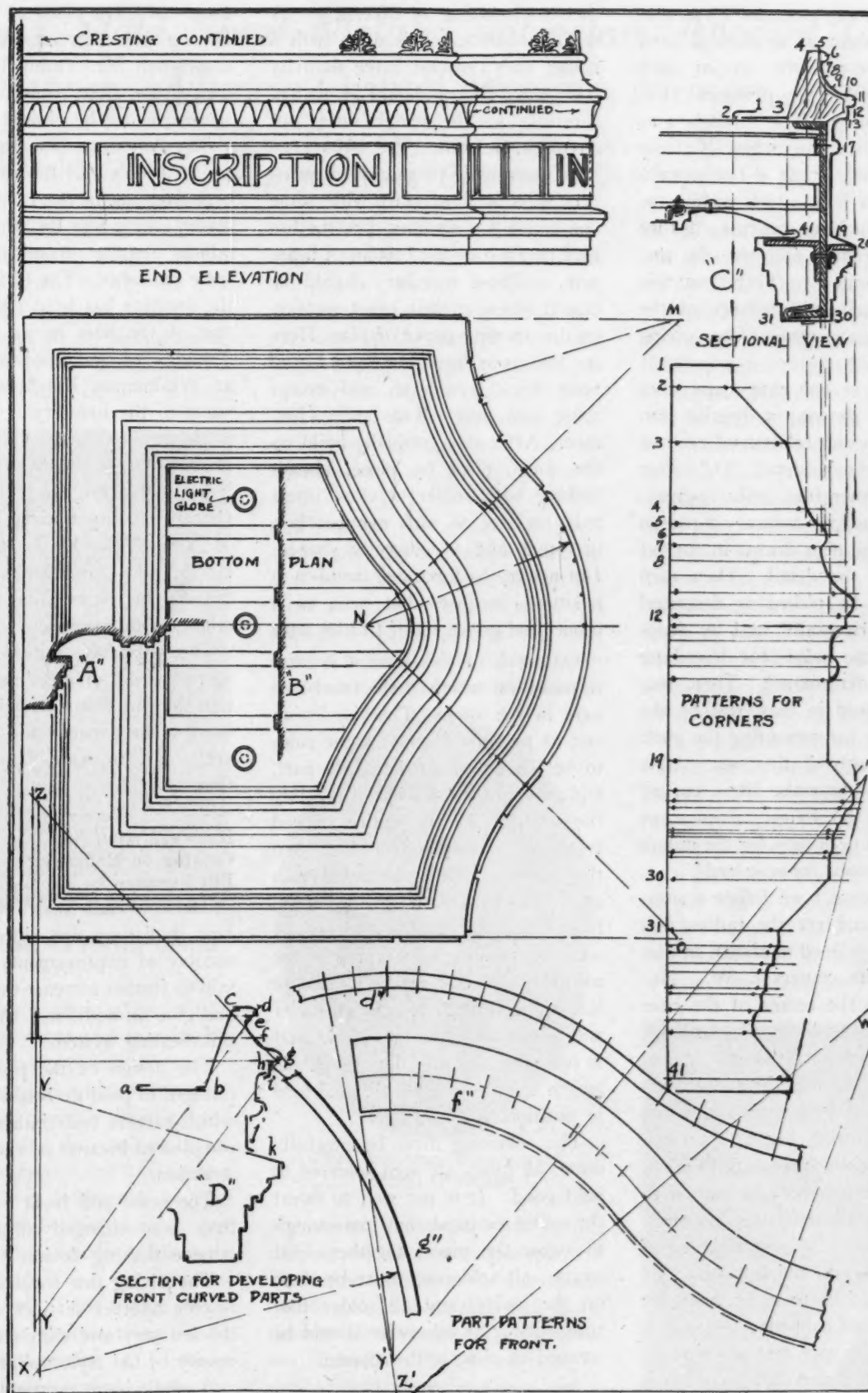
cross those in pattern of similar number. This will enable drawing the miter cut lines.

But for the front, which has the curve, we must make our layout to suit either hand or machine work. Where shops are in a position to have a concern roll out certain members, that is advisable, since it is quicker and makes for greater stiffness. But where this is not possible and the mould must be made by hand, a section should be detailed full size, as we show at "D." Here we show the size of each piece and how much can be made in one piece. Observe, because of the curved front, the bends of the metal cannot be shaped, and so the entire detail must be made in small pieces.

Thus, all circular cornice work is developed on the radial line principle. So anybody who can lay out a funnel or a tapering dish pan can lay out these moulds. The only difference is that a moulding must be hammered or bumped into shape, and for this reason some slight adjustments are necessary. What we do is first to draw a detail, as at "D," showing in every member where we must make a point. Thus the roof plate a-b can be described as a flat piece, using the centers M-N-O, when the detail is placed directly, as the end elevation. The flaring piece b-c would be developed identical to a funnel, picking the radius lines from plan.

Observe the spaces of plan described between radius lines is only part of a circle. So that if full circles were described around centers M and N we would have many lines where each two could represent the two lines of a funnel. Just so the flare b-c would be described, but only covering a part of the circle—in fact only as much as covered by





Patterns for Marquee

the curvature in plan. The part c-d is also a flat ring, made a little wider to allow for bending the rolls down as at d of detail.

But the lower half of the roll, as

at e, must be developed by passing a radius line, as e-y, and the curve is straightened out on the flat to have the proper girth. The radius M is placed horizontally from e, and

from this point a vertical line is dropped to cross the radius e-y as shown. In this way the center line is the same as a center line in a funnel, and we can pick this radius

y-e and use any place, as Y', as center strike the arcs as shown. From the plan we pick the circular girth until we get to the divisional line, when we draw a line through it as Y'-Y''. Pick the radius N from the plan and set as e horizontally and drop a line, which makes the second point Y in our case. So we pick this radius and use the arc, mark off point Y'. Then from this center describe the balance of the pattern to the center line, giving pattern d''.

Observe in our case space does not permit showing a definite plan giving the exact relation of each of the members in detail "D." Our radii are, therefore, only approximate, because for accuracy a person must have a plan drawn in correct relation to the detail. Then each radius can be picked as described and set horizontally, and by dropping lines the radius for describing pattern is determined. Then, too, the lines used in plan will be the ones to use for measuring the girth for the length of the part. It is always well to make these curved members a bit longer, since some trimming is necessary for the miters and connections between ends.

For the cove f we follow a similar policy and get the radius f-Z, which is developed as shown in pattern f'', with centers Z'-W'. Notice we use the center of the cove as a measuring line and to set off the horizontal plan radius. If this point were carried into the plan view and followed around it would be the measuring line from which spaces are taken to step off the girth. Observe the member g is similar to d and is described from x as center. The member h is a straight strip, while the foot mould k has its roof line extended as to v, or wherever the center line happened to come.

In this way each and every member is treated and developed in a blank pattern. The matter of shaping up each blank is also quite a job, especially to prevent buckles or bruise the metal and cause it to deform. Most of the members that need shaping here can be nicely done over a round stake with a mallet, so

that no bumping is necessary. A much smoother job is done with a mallet and a round stake than by bumping. Edges should be turned carefully so the metal does not stretch or deform.

In assembling these curved members it is well to start with some one broad flat member, like the top roof ring a-b, or the bottom of beam ring. These members should be tacked down in their exact position on the drawing paper of plan. Here see that your lines correspond, and your work lays level, and everything sets well before going further. After this gradually build up the work, piece by piece, always tacking with solder at close intervals, and see so each member lays up snug and is correctly shaped. Do not try to force one member in position, because that will twist others and give a lot of trouble later.

On work of this kind it is wise to make the miters of the front corners in the shop. That is, let an end of possibly 2 feet for the sides to be assembled to the front part, and making a cross seam at possibly the center. If the entire curved front can be made in one piece, then that is preferable, because cross seams are hard to make on curved hand made work. There is always a certain twisting or warping of the members and that makes it hard to line up perfectly. It is much easier and better to work the whole part in one piece, because then the whole length is built up gradually and held in position.

The soldering must be carefully done; all joints are well soldered to hold good. It is not well to sweat the solder too much, but just enough to sweat the pieces together. Of course, all soldering must be done on the inside, and all solder that runs outside or otherwise should be scraped off clean to the copper.

#### **S. S. Tuthill Resigns as Secretary American Zinc Institute**

Stephen S. Tuthill, who since its organization July 29, 1918, has been secretary of the American Zinc Institute, Inc., has resigned his posi-

tion, effective August 1, 1929. During his secretaryship of the association Mr. Tuthill has become one of the best known association secretaries in the United States.

The American Zinc Institute was one of the first of the various trade organizations in the nonferrous industry. Zinc was the first metal on which regular monthly statistics were published. The tariff work of the institute has been recognized as one of the best in its class. Mr. Tuthill's acquaintance with affairs at Washington has been of great value to the industry.

He is President of the Trade Association Executives in New York and acting secretary of the Orange County Society in the city of New York. He is also a member of the Academy of Political Science in New York, and many other organizations.

Just what Mr. Tuthill intends to do he has not divulged, but it is certain that his many friends throughout the sheet metal industry will be very sorry to learn of his resignation.

#### **Hall-Neal Has New Catalog on Radiating Fin Furnace**

The new Hall-Neal Furnace, with heat radiating fins, incorporate a number of improvements which are said to further increase the efficiency and give an additional advantage to this heating system.

The design of the fins has been changed to produce beneficial results which careful tests indicate are accomplished because of the new construction.

The grate and front construction have been changed to provide an outside shaking device.

The diving flue construction represents another distinct advance in the industry and eliminates the necessity of old style radiators.

A single-piece, wrought-steel base ring solves the breakage problem and speeds up installation.

A new catalog has just been issued illustrating many new details of construction and is being mailed upon request to Hall-Neal Furnace Company, Indianapolis.



## Indiana State Sheet Metal Contractors Appoint District Governors—Muncie District Meeting, Marion, May 17

*Mark State Off Into Eleven Districts for More Effective Work*

THE Indiana Sheet Metal and Warm Air Heating Contractors' Association during the past year has done a great deal of constructive work in perfecting an organization that will function effectively in the discharge of a great



Louis Lehnen, La Fayette District Governor

many of the matters which can be brought to a successful termination by associated efforts.

The convention which this organization held recently has proved conclusively that the employment of a paid secretary is of the utmost value where it is desired by the group, thus associating itself to put its organization across in all parts of the state.

Perhaps one of the things which has done more than anything else to make this association of Indiana sheet metal men successful is the practice of holding group meetings in different parts of the state throughout the year. These meetings were very well attended, and they gave rise to another idea which the association adopted at its recent convention.

The holding of these group meetings in different parts of the state, of course, almost requires that someone personally acquainted with the men in the district where the meeting is to be held be on the job to advertise the fact that the meeting is going to be held and to provide things of interest to the contractors in those particular localities.

Therefore the association determined that the best way of meeting this requirement was to district the state into convenient sections and appoint a district governor for each one of these districts. These governors are elected for one year at



Clive Branham, Bloomington District Governor

the annual convention. It is the purpose of the association that the Executive Secretary, having headquarters at Indianapolis, shall work through these governors in the various districts. The entire state is divided into eleven districts and a governor has been appointed for each one of the districts. The accompanying illustration shows how the state has been divided, giving the name and city of the district governor.

The jobs these governors hold are

not merely honorary jobs. On the contrary, the successful working of the association in the future will depend almost entirely upon the success which these governors have in building around their district offices a district organization.

It is realized that all contractors do not have the same problems. For instance, the problems which the contractors have in Indianapolis may not be experienced by those throughout the state, and vice versa. Therefore if the men in any one of the districts have a set of problems which do not concern the other contractors, they need merely bring them to the attention of the district governor and work through him. The executive secretary will, of course, be in close touch with the governors at all times. This arrangement should work out for the benefit of all concerned and should do a great deal toward strengthening the entire organization, bringing it to a point of strength where its influence will be felt.

It will be exceedingly interesting



D. R. Swisher, Richmond District Governor



to watch the progress of this experiment and to have reports from time to time from the governors as to how their work is progressing. Do not forget, however, that these district governors will need the support of every sheet metal contractor in their respective districts. Otherwise their work will be greatly curtailed. This might not be a bad idea for other state organizations to adopt.

President Frank E. Anderson of the Sheet Metal and Warm Air Heating Contractors' Association of Indiana announces the selection of five district meeting places during 1929. These will be held in the five districts which did not hold meetings during 1928, and are in addition to the Indianapolis picnic sponsored by the Indianapolis Association who will invite the state contractors to be their guests.

The first meeting will be in the Muncie District, but will be held at Marion on Friday, May 17th. District Governor, Herman I. Michaels of Muncie, will be in general charge with Wilburn Woodward of Marion in charge of local arrangements. The second meeting will be held at Bloomington on Friday, June 21st, in charge of Cleve Branhams.

The Indianapolis picnic will be an all day affair on Saturday, July 27th. Thos. Lavery, District Governor of the Indianapolis District, is also chairman of the Indianapolis picnic committee. Homer Selch is president of the Indianapolis organization. The state-wide membership will be their guests.

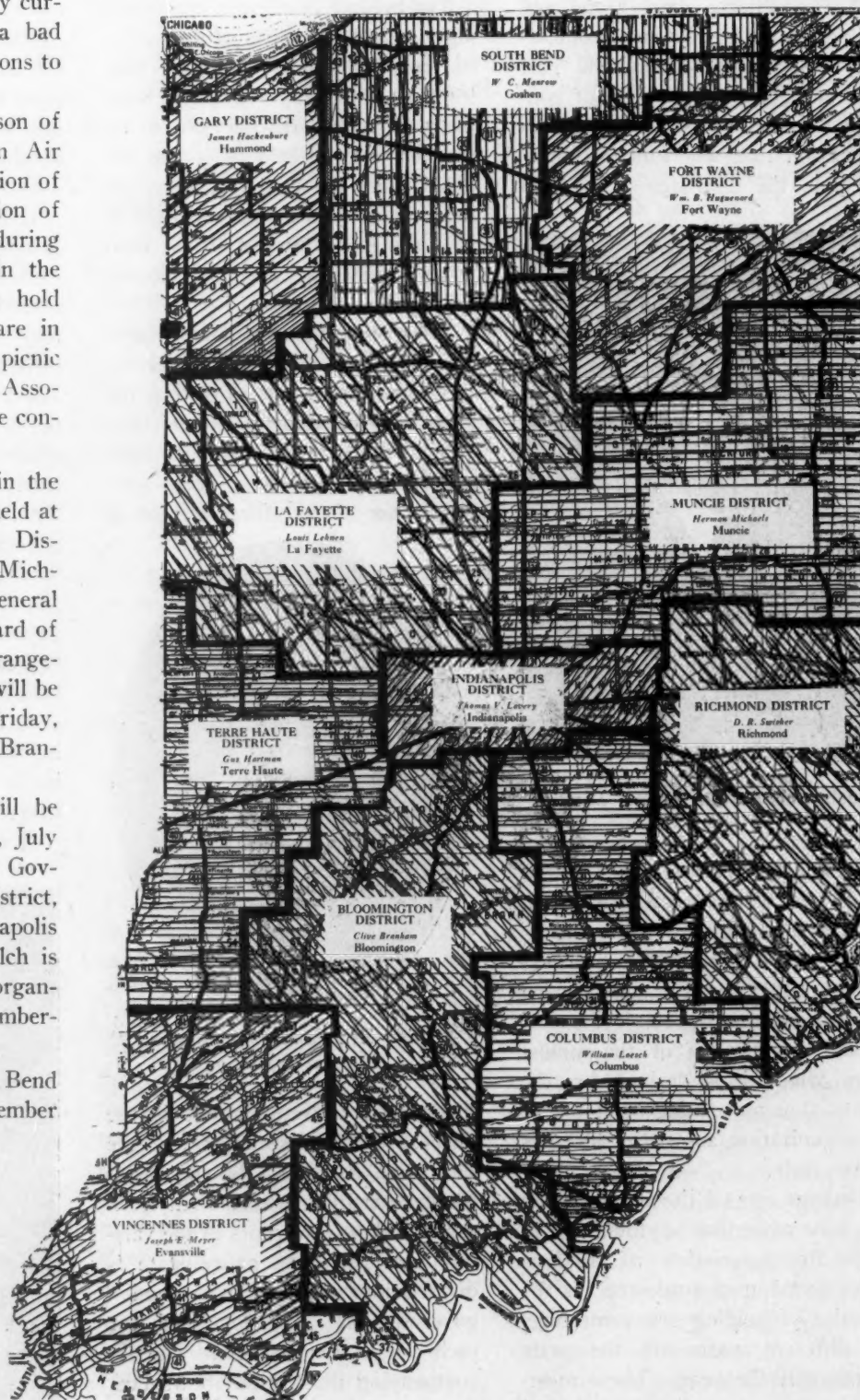
The meeting of the South Bend District is set for Friday, September 13th, and will probably be held at the Elkhart Hotel at Elkhart. District Governor W. C. Manrow of Goshen, will be in general charge, assisted by Virgil Roland of Elkhart, who is chairman of the Board of Governors, and by a local committee to be selected later.

The Gary District will probably

charge of District Governor James Hackenburg. Vogel's Fish House is favored as the meeting place. The Columbus District will have their meeting at Columbus on December 13th. Wm. Loesch is the District Governor and will be assisted by Walter Brooks and a local commit-

tee. Franklin, Shelbyville, Jeffersonville, Madison and Seymour will each have local committees to bring delegations to this meeting according to plans of District Governor Loesch.

The state convention is set for  
(Continued on Page 65)



Map of the State of Indiana showing how the State has been divided into Districts by the Indiana Sheet Metal and Warm Air Heating Association and showing each District and the name of the man who has been Appointed Governor in that District.

# Scientific Selling Versus Order Taking in Warm Air Heating Industry

## Opportunity for Greater Sales Possibilities Opening in Chicago Area

**A**NOTHER sock on the nose of poor selling. In a previous article the fact was pointed out that too many warm air furnace men are using incorrect merchandising methods. A condition was revealed showing that too many furnace installers are still selling castings and firepots rather than heating service, health, comfort, and economy.

Contrasted with these old fashioned selling ideas were the modern methods employed by other phases of industry, notably the Palmolive Soap Company, which had brought them phenomenal success, and principally because of the fact that these firms had been awake enough to probe around until they found something in which the customer himself was interested in keeping or securing, and then gently but firmly persuading him that the use of their product would bring about the desired effect.

### Points of Merit Unequaled— Why Not Tell People?

The warm air heating system has points of merit about it that far outweigh those contained in Palmolive soap. It will assist in maintaining the good health of the entire family; it produces home comfort during the inclement weather; when thermostatically controlled it permits the family to arise in the morning in warm, comfortable rooms; it reduces the fuel bill because of its greater economy and flexibility. It avoids stagnant, dust laden air in the entire house, not only producing greater comfort, but greatly reducing the cleaning bills, and all this at an extremely low cost, relatively speaking.

The furnace itself has many points about it which permit of less labor, less bending of the back, humidifiers that clean and moisten the air, ash pit sprinklers that moisten the ashes and reduce the

amount of dust and dirt content of the basement air.

There are enough points about the entire heating system to enable the warm air furnace man to combine them in some terse phrase that would appeal to the home owner and excite a desire within him to secure those benefits to himself and family by ownership of a warm air heating system.

But the home owner is not going

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*Here in this country of ours we are enjoying for the most part the greatest prosperity that any people have ever known in history. That prosperity has come as the result of efficient management, business sense, and fair play.*

*The industries that are not enjoying this prosperity begin to stick out like sore thumbs. It is so unusual and so unnecessary for an American industry not to be prosperous that the minute one is found not to be so, it is the subject of public suspicion. People demand to know what is the matter with it and who is responsible.—James J. Davis, Secretary of Labor.*

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to think of those things himself. He will agree readily enough that he wants comfort and health-giving warm air in his home; he will assure you that he would be using good judgment in bringing about self-regulation of his heating plant; nothing he would like better than to cut down his fuel bill for the heating season, without sacrificing the comfort to be had from an adequate, well installed, efficiently functioning warm air heating system. He must be told where and how he can come into these most desired

benefits, and it is up to the warm air heating industry to tell him.

### To Advertise Warm Air Heat in Chicago Area

A movement to bring about that result is now fortunately under way in various communities where warm air heating men have banded themselves together in cooperative plans to sell warm air to the public.

The latest of these plans to come to our attention is that of the Warm Air Heating Institute, which plans to tell the public in the Chicago area of the merit of warm air heating as installed under the Standard Code, and secondly, to obtain, of course, definite prospects for the contributors to the campaign.

It is the plan of those who have the campaign in charge to open it by offering cash prizes for the best letters on "Why I Like My Warm Air Furnace." This offer will be broadcast over two radio stations and printed in the Chicago Daily News. The winners of the contest will be announced over the radio. The offer will be followed by another of a gift, possibly a thermometer, to those people sending in names of prospects interested in a warm air job. These leads will be turned over to contributors, and \$5 paid to the sponsor of any such prospect sold by one of the contributors.

In all such advertising the public will be requested to write in for literature and information, and these inquiries will be followed up by mail. The names and addresses of people writing in will also be given to contributors.

This is the plan. The success with which its sponsors will meet is contingent upon the amount of money that can be got together, but since the entire warm air heating industry in the Chicago area is going to benefit by it, there is no rea-



son to believe the industry as a whole doing business in that area would not wish to support it.

#### **Furnace Installers in Chicago Area Cooperating**

Mr. Cronin of the Building Department of the City of Chicago informs us that so far as the city's Standard Code ordinance is concerned, it is functioning. There are some 80 warm air furnace installers who have taken out their licenses and arranged for their bonds and in every other way have indicated their desire to go along with the city.

There are eight inspectors, of which Mr. Cronin is the chief, four on the north side and four on the south. So far as is known these men are on the job working for the successful functioning of the ordinance. They fully realize that it is to their advantage to have the ordinance become successful, because unless the department shows itself to be self-supporting, it will be discontinued. It is not associated with the politics of the city.

Each and every one of these inspectors is thoroughly sold on the Standard Code method of warm air furnace installation. One needs only speak to any one of them for a short time before their enthusiasm for warm air heating makes itself manifest. The chief inspector, Mr. Cronin, is wide awake, thoroughly sincere in his desire to make the department function the way it should, and he wants the fact broadcast that the department will brook no infraction of the ordinance either on the part of the furnace installers or the inspectors under him. It is the duty of furnace installers who are going along with the ordinance to report any infraction of the law to him that comes to their attention. But he must have complete facts, and given those, he will deal with the offenders pre-emptorily.

#### **Prospects Look Bright in Chicago Area**

Under these conditions the prospects for warm air heating in the Chicago area look a great deal brighter than they have at any time during the past year. Mr. Cronin

also reports that during the month of April there were some 500 installations made in the Chicago area.

The conditions of the Chicago ordinance call for a \$5 permit fee for every job, that each furnace installer take out a license to do business in the Chicago area, that he take out a \$10,000 bond, and that he install all jobs strictly in accordance with the Standard Furnace Ordinance, which encompasses the Standard Furnace Code. It is the endeavor of the Chicago City Building Department to see that furnaces installed are made real heating plants.

Here is taking form the nucleus of one of the greatest opportunities the warm air heating industry has ever had. Will the industry and the men in it rise to the occasion?

#### **Record First Quarter for Fan Manufacturers**

A heavy demand for air conditioning and ventilating equipment for industrial and public buildings is bringing a record first quarter to the fan manufacturers, according to a report by C. A. Booth, vice-president of the National Association of Fan Manufacturers.

Mechanical facilities for controlling air conditions are becoming increasingly popular in manufacturing and industrial plants for the protection of the workers in industry and for reducing production costs in manufacturing. Mr. Booth stated that a careful checking of the fan and blower business gives him reason to believe that business generally this year will run at least 10 per cent ahead of 1928. A survey of the business situation indicates that there will be considerably more activity in the building of factories this year but that activity in other building lines may be lessened somewhat.

The survey of fan manufacturing included reports from the American Blower Corporation, Buffalo Forge Company, B. F. Sturtevant Company, Bailey Blower Company, Ilg Electric Ventilator Company, Garden City Fan Company, and the New York Blower Company.

#### **American Air Filter Company Grows Out of Merger**

Plans were recently completed for the formation of the American Air Filter Company, Inc., which will maintain offices at Louisville, Kentucky and Bradford, Pennsylvania.

The company is a result of a recent merger between the General Air Filter Corporation, Bradford, Pennsylvania; Midwest Air Filters, Inc., Bradford, Pennsylvania; the National Air Filter Company, Chicago, and the Reed Air Filter Company, Louisville.

W. M. Reed, president of the Reed Air Filter Company, has been made president of the American organization, but will continue as president of the Reed company.

#### **Success Heater Mfg. Co., Des Moines, Has New Dealer Sales Plan**

The Success Heater Manufacturing Company, Des Moines, Iowa, has devised a complete workable plan for use by furnace dealers in putting their businesses on a money-making basis.

The new plan is known as the 6-point objective idea, the six points being as follows:

1. Establish you as the heating expert in your community.
2. Bring heater prospects to your store—ready to do business.
3. Sell your ability to provide permanent heating satisfaction at lowest cost.
4. Sell the importance of your local service.
5. Promote your entire business.
6. Advertise your business aggressively at a fraction of what it would cost you to handle it yourself.

The plan of the idea is embodied in a large, attractive booklet that has been recently compiled which gives full details. Only one dealer in each town or city is to be allowed to participate in the plan, so that your request for copies of the plan should be mailed without delay. Write to the Success Heater Manufacturing Company and ask for their "Big Success Idea."



# *An Opportunity for Coöperation Between Oil Burner and Warm Air Heating Industries*

*Each Dependent on Other for Increase in Sales of Heating Equipment*

By L. WAYNE ARNY, Advertising and Publicity Director, Richardson & Boynton Co.

**I**N THOSE heating discussions which I have heard during the past year or two—and they have been numerous—in which oil burners have been mentioned, it has been painfully apparent that a woeful lack of knowledge of the oil burner industry exists among the heating equipment manufacturers.

That is strange to me, because I can't conceive of any great progress that the oil burner industry could make without equal progress being made by heating equipment manufacturers. Perhaps a great deal of the trouble that you gentlemen have experienced has come from this lack of our mutual association. I think your problem is our problem—one of sales. You can probably make as many burners as you can sell, and we are making more heating apparatus than we can sell. If that is so, then does it not follow that we can pool our interests to mutual advantage?

## **How Extensive Is Present Market for Heating Equipment?**

There are only about 50 per cent of the homes in this country being heated. That statement may startle some of you, but it is based upon a fairly accurate survey. Fifty per cent of the homes that are not heated are in localities where heat is not required, where there are few or no basements, or where for some reason a heating man has failed to get in. But that 50 per cent of the unheated homes represents a tremendous market today for all of us.

The main reason for the marked growth the warm air heating industry has experienced is that there are

probably more advances along lines of modern heating in warm air than in steam, hot water or vapor. If that is the case, then it should interest you gentlemen to know how the oil burner fits into the warm air furnace.

## **Idea Mistaken That Oil Burner Is Only Adapted to Steel Furnaces**

The opinion is general that oil burners should be applied only to steel furnaces. That belief is retarding the sale of oil burners, particularly in the middle west, where in some towns the percentage of warm air heating installations is very high, and of those installations the furnaces are probably 85 per cent cast iron.

That conviction may be based on sound reasoning. I don't know; perhaps you do. But I have failed to find any data of accurate research or scientific investigation that bears out the contention that an oil burner is best adapted to a steel furnace.

The reasons for this mistaken conviction are obvious. A cast iron furnace is built in several parts. You have the base and the firepot, which in some cases is in two parts, and then the radiator, which goes on top of that. That means that you have quite a few joints, depending on the design of the furnace. All of those joints are subject to some leakage perhaps, which, of course, would operate against good oil burner performance.

Whereas with the steel furnace you have no joints; you have riveted or welded seams. The fact is, however, that there are a great many cast iron warm air furnaces in successful operation today with oil burners; furnaces that have been in operation long enough to demonstrate the fact that if there is any

difference between cast and steel in oil burner operation on a furnace, it must be a slight one.

Furthermore, this point has been brought out from actual field experience, that if your steel furnace does go, and they do sometimes, you have a major operation to repair; whereas if your cast furnace goes, it means then merely the replacement of one section, either a half of a firepot or perhaps a base, and it is not nearly the job that it is to repair or replace a steel furnace.

The great difficulty in the heating industry today, from a standpoint of merchandising and sales, is the dealer-consumer contact. I have no doubt that that problem is common to your industry also. Whether it is your activity or not, I don't know. Someone, however, has apparently scared the coal man stiff during the last few months.

In the last three or four months we have been deluged with personal calls and with correspondence with schemes from coal dealers for a co-operative plan whereby we and they can sell more furnaces and more coal in their respective localities.

Effort in that direction has been successful in some places. I have one town in mind in which there is a coal dealer who encloses with his monthly bills a piece of literature from a boiler manufacturer, on replacement of boilers, on the sale of hot water tank heaters, on anything that may burn his coke. In addition he has engaged in a policy of servicing in which, without cost to the prospect, he offers to advise them on what is necessary to put the heating system in the best possible condition for economical fuel consumption. That all pays. It has been very successful.

I preface all the remarks that I

\*This speech was made at the Sixth Annual Exposition and Convention of the American Oil Burner Association which was held recently at the Hotel Pennsylvania, New York City.

have to make with the statement that I know nothing of the oil burner industry and I may be talking very wide of the mark. But it seems very obvious that many of your problems are also included in this effort to sell this fellow out here somewhere who needs a new furnace and needs an oil burner.

#### **Working for Good Will of the Customer**

Under that sort of service I know from certain surveys that have been made that your representative, the oil burner agent in that town, could be very successful along lines of such service. Frequently we have men coming into our office who have bought oil burners and have had **very unsatisfactory** results with them, largely because the man who sold them the oil burner made no preliminary check of the unit, resulting in his installing an oil burner in an inadequate heating plant. You can imagine what happens to your oil burner when it is placed on a heating unit of inadequate size.

That is true with warm air furnaces as with other types of heating units, and there are more improperly installed warm air furnaces in homes today than there are furnaces which are properly installed. By that I mean furnaces with too low rating, furnaces that are too small. In that case the oil burner is forced to the limit; it fails, and the man comes back to us or comes back to his manufacturer. He is thoroughly disgusted with your oil burner and thoroughly disgusted with our heating unit and wants to know what else there is in the world that will heat his house. He is very angry and it is a pretty hard job to get him in a happy frame of mind again.

I believe that your dealers should regard it a part of their service to examine the heating unit in which the oil burner is to be installed before the installation is made. If he is careful in doing this he will find much less service calls after the installation is made.

You can be assured that any oil burner agent who is not sufficiently acquainted with warm air heating to

measure heat losses can get that information from a local furnace installer. Furthermore, he can probably get the services of that dealer to help him sell his oil burner, because both of them might sell an entirely new plant. There is opportunity for a very close association between the two.

#### **Advocates Closer Relationship Between Oil Burner and Furnace Men**

I just want to leave this thought with you: I say this advisedly, because I have attended meetings of the boiler and warm air heating associations. The members of both those associations are far from an understanding of your problems. Therefore only good could result from a closer coordination between the two heating associations. With combined effort the three units can solve this problem which is common to all and result in increased sales of heating equipment.

You will find, I think, that the heating equipment manufacturers are agreeable to any effort made for common advantage.

Today, the Warm Air Association is meeting in Indianapolis. I don't know where you meet next year, and I don't know where they are going to meet next year, but I think it would be a fine thing if we could meet together in some town and have a joint session in which the great many problems which are arising all the time can be discussed to our mutual advantage.

#### **Peerless Announces Completely Enclosed Warm Air Furnace Fan**

A completely enclosed warm air furnace fan containing only one moving part is announced by the Peerless Electric Company, Warren, Ohio. Housed in the motor base is a compensator coil for taking care of variations in voltage. Heavy cast iron padded with rubber is used in the base construction. Turning at 1,200 revolutions per minute, the 12-inch fan has a capacity of 1,000 cubic feet per minute. In overall height the device measures 13 inches. Its weight is 20 pounds.

When in use this fan does not interfere with radio reception, according to the manufacturer. Installation is accomplished through a slide in the cold-air duct of the furnace. A connecting wire to the power supply line is brought out through a bushing. A single switch may be located near the furnace draft control, or control switches may be installed at various convenient points throughout the house.

#### **Ira C. Misner to Be Sales Manager, Wise Gas Furnace Department**

Ira C. Misner has been appointed sales manager of the gas furnace department of the Wise Furnace Company, Akron, Ohio. Mr. Misner has been associated with the gas industry for over 20 years. Recently he was serving in a sales promotion capacity with the Federal Company of Chicago. A recent announcement also states that two new sizes of the Wise warm-air furnace have been approved by the American Gas Association Laboratory.

#### **International Opens Branch Warehouse at Long Branch, L. I.**

International Heater Company, Utica, New York, has opened a new branch warehouse at Long Branch, N. J., in charge of L. N. Thomas. Mr. Thomas formerly was connected with the Richardson & Boynton Company, and from 1912 to 1918 was traveling representative in New York State for the International Heater Company.

#### **Master Heat Regulator Put on Market by White Mfg. Co.**

"Master" is the name of a heat regulator brought out by the White Manufacturing Company, St. Paul, Minnesota.

In a coal-burning plant this device operates by controlling the draft. When applied to oil and gas burners or automatic coal stokers it regulates the valves controlling the supply of fuel and air.

The device is furnished either with or without an eight-day clock.



# Hiking of Building Costs Seen as Result of Adopting 5-Day Week

*\$50,000,000 Increase in New York and Chicago  
Alone Unless Offset by Greater Efficiency*

A GENERAL advance in building construction costs throughout the nation is expected as the five day work week for the building trades approaches general adoption, according to a survey just made of conditions in the building industry by S. W. Straus & Company. According to the Straus investigation, the present trend indicates that the entire building industry will be on a five day basis in the near future.

"Chicago's increased cost, if the five day week were adopted throughout the building trades, would exceed \$12,000,000 on the basis of the 1928 building volume for Chicago of \$315,800,000," the report states. "This figure would be on the basis of a 4 per cent increase, an arbitrary figure assumed to represent the approximate increase in construction cost on the basis of an investigation carried on by the building interests. The figure of \$12,000,000 increased cost in Chicago might be offset, however, by increased efficiency in labor and labor saving machinery.

## Taken Up in New York

"From an economic standpoint the most important current development in the building industry in this country is the rapid drift toward the five day week. Following its recent adoption by the 12,000 bricklayers in New York City, evidence is at hand indicating the possibility of the entire industry in the eastern metropolis quickly adopting the short week schedule. According to C. G. Norman, chairman of the board of directors of the New York Building Trades Employers' Association, the 150,000 building craftsmen in New York and immediate suburbs will be on the five day schedule by January 1 next. This, he estimates, will add approximately \$40,000,000, or 4 per cent, to New York's annual building bill.

"In Chicago, plasterers and painters are now on the short week basis, and in other trades the schedule will be one of the major points of discussion on new wage agreements as of June 1, this year.

## St. Louis Leads Move

"St. Louis comes nearer being completely on the five day week plan than any other American city. The following building trades are now operating on it there: Carpenters, plasterers, cement finishers, elevator constructors, electric workers, lathers, sheet metal workers, plumbers, steam fitters, asbestos workers, and all craftsmen connected with the painters' trade.

"The five day week is gaining considerable headway on the Pacific coast, particularly in San Francisco, Portland and Seattle, but has made no appreciable progress in Los Angeles, because of the open shop basis.

"Considerable progress is reported in various other important building centers in all parts of the country.

"The adoption nationally of the 40 hour week schedule would add close to \$250,000,000 to the annual building program unless greater labor efficiency through mechanical innovations can be developed. It seems to be the feeling among contractors and builders that this can be accomplished only in part.

## Sees Handicaps to Business

"Oscar W. Rosenthal, official spokesman for contracting interests in Chicago, voices the belief that the 40 hour week schedule will prove a serious handicap to the industry, as it will prolong the period of construction on large operations. Builders will then be faced with the alternative of meeting heavy overtime charges or of not being able to get

their jobs completed for the May 1 or October 1 rental periods.

"Eastern contractors generally express the point of view that the effect of the five day week cannot be offset by increased efficiency, inasmuch as construction is now about as efficient as possible. They see in effect the recent New York agreement between contractors and bricklayers as virtually a forerunner of a nation-wide movement toward a shorter work week."

## Wisconsin Sheet Metal Contractors Appoint Delegates to National Convention

A meeting of the Master Sheet Metal Contractors' Association of Wisconsin was held May 1, 1929, with President Henry Geussenhainer in the chair. Those present were: Louis Reinke, Milwaukee; Alfred Goethel, Milwaukee; Walter Belau, Milwaukee; Otto Geussenhainer, Sheboygan; Henry Geussenhainer, Sheboygan; Wm. Gehrke, Sheboygan.

As the national convention will be held June 3 to 7 at Baltimore this year, action for the appointment of delegates was taken and the following delegates and alternates appointed:

Regular delegates: Alfred Goethel, 829 31st Street, Milwaukee; Henry Geussenhainer, 809 North Eighth Street, Sheboygan; William Gehrke, Sheboygan; Louis Reinke, 518 Market Street, Milwaukee.

Alternates: C. C. Tölg, Waukesha; Charles Pansch, Bridge and Ontario Streets, Racine; R. Jeske, 112 Reservoir Avenue, Milwaukee; W. A. Belau, 317 McKinley Avenue, Milwaukee.

The secretary was instructed to write a letter of condolence to Mrs. John Jones, Racine, widow of our deceased member, John Jones, of Mohr Jones Company.



### Christie Cleaner a New Product in Warm Air Furnace Field

The Gottschalk Heating Company, Covington, Kentucky, has developed what is termed the Christie Cleaner, a super power vacuum cleaner for use by the furnace installer in cleaning furnaces.

The machine is small enough to be portable and can easily be carried into the basement by two men.

Back pressure, which has been found objectionable in some cases in vacuum cleaning, is eliminated in the Christie cleaner by a special air release outlet on the vacuum bag.

The starting switch is built on the motor and twenty-five feet of heavy insulated electric cord lead directly from the switch.

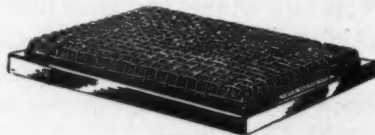
The bag is 15 feet long and 20 inches in diameter, made of heavy canvass. It can be easily cleaned and quickly attached to the fan housing.

The machine is built so that it will not "walk" during the cleaning operation. The wheels are rubber tired, ball bearing.

Complete details concerning this new furnace cleaner can be secured by writing the Gottschalk Heating Company, 242-244 Pike Street, Covington, Kentucky.

### Tuttle Register Dust Catcher Co. Establishes Chicago Office

The Tuttle Register Dust Catcher Co., Louisville, Ky., has recently opened a Chicago office in the Monadnock building to take care of the increased demand for their product in the Chicago territory.



The Tuttle Dust Catcher

Though this article has been on the market for only two years, it is filling and the trade has been very quick to realize that this is what they have been looking for for a number of years.

This dust catcher is exactly what its name implies and does catch and remove the loose dirt and dust in the warm air currents from a furnace.

Tests conducted by experimental laboratories have shown the efficiency of this dust catching register to be high and the amount of dirt so caught is unbelievable.

The device is very simple, it only taking thirty seconds and no tools to install and working either on a

floor or wall register with real results.

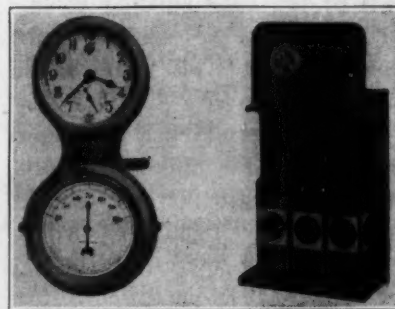
That there is a market for this product has been proven by the fact that the sales in two years are far over thirty thousand filters.

Information may be had by addressing the Tuttle Register Dust Catcher Co., 1657 Monadnock building, Chicago, Ill., or Louisville, Ky.

### Heat Regulator Operated with Dry Cell Batteries

The American Thermostat Company, Newark, New Jersey, are the manufacturers of the Marvel temperature regulator, adaptable for use on warm air heating plant.

This thermostat includes the thermostat proper, an 8-day clock, and a dry cell motor. The peculiar feature of the Marvel temperature reg-



The Marvel Temperature Regulator

ulator is that the motor is automatic, operating on three dry cells. It has a dial range of from 40 to 100, marked in single degrees. The accompanying illustration shows the principal features.

A. S. Bevens, F. P. Bevens, and A. C. Eckert are president, treasurer, and secretary, respectively of the company.

### Sam Smukler Will Travel Northern New Jersey for Elizabeth Heating Co.

Samuel Smukler will join the sales force of the Elizabeth Plumbing & Heating Supply Company, 28 Rahway Avenue, Elizabeth, New Jersey, and will represent that company in northern New Jersey.

Mr. Smukler formerly represented Richardson & Boynton in that territory.



The New Christie Warm Air Furnace Cleaner

**GREATER STABILITY***(Concluded from Page 53)*

consequently a large amount of possible business is lost which could otherwise be theirs. Hence in these territories the manufacturer feels that he has a perfect right to sell wherever he can.

No one questions any manufacturer's right to sell wherever he can. He can run his business into bankruptcy if he wishes and no one will try to stop him unless he has a loan at the bank. But common sense should tell him that if he sells a piece of metal to a layman, the chances are 25 to 1 that that piece of metal will be installed in some place or in such a way that it will not give the best of service of which it is capable under ordinary circumstances. Manufacturers of many types of products spend a great deal of time and money for insurance that their product is used correctly.

**Here Is the Sentiment of One Well-Known Contractor**

One well known sheet metal contractor expresses the following sentiment in regard to ways of rectifying conditions in the sheet metal industry to the end that construction will be more permanent and a consequent greater employment of men, for longer periods during the year will result:

"Steady employment would without question increase the efficiency of an employe and would decrease the overhead of many a sheet metal contractor, and is a condition that many contractors would like to see brought about.

"Numerous suggestions have been made and the Sheet Steel Trade Extension Committee at one time thought they would be able to interest sheet metal contractors in the manufacturing of special articles of sheet metal that they were trying to create a demand for through their advertising.

"Almost all of the articles that they suggested meant a matter of special equipment and a production on a large scale which few contractors could engage in.

"I have been of the opinion for

many years that the present method of distribution of materials is a serious problem to the steady employment of mechanics by sheet metal contractors. Any owner, contractor, architect or jack-leg can purchase sheet metal and sheet metal products at the same price as a legitimate sheet metal contractor, resulting in a very large amount of sheet metal work being erected as day work. Slate producers and tile manufacturers do likewise, and with the materials purchased by owner or contractor, no sheet metal contractor can compete with day labor.

"Work done by this method is always poorly done and results usually in a complaint against the materials, yet the producers continue to sell to every cross-road store, lumber yard or any other person.

"A change in the sales policy of the manufacturer and the producer will, in my opinion, go a long way toward improvement in the entire industry and place the sheet metal and roofing contractor in a better position to furnish steady employment to those in his employ."

**INDIANA DISTRICT MEETINGS***(Concluded from Page 58)*

Tuesday, Wednesday and Thursday, January 21, 22, 23, 1930. The state convention is for members of the state organization, but district meetings are open to all branches of the sheet metal and warm air heating trades, including both members and non-members among contractors, manufacturers, jobbers, salesmen, etc.

These district meetings have proven very successful during the past year, having been held at Fort Wayne, Terre Haute, Vincennes, New Castle, Lafayette and Indianapolis. The meetings are not given over to the business, but are purely social affairs, although the program contains good informative matter. The meetings are in the form of dinners scheduled late enough in the evening to give out-of-town contractors and salesmen an opportunity to complete their day's work before starting.

The complete schedule for 1929 district meetings is as follows:

Muncie District, Marion, Friday, May 17.

Bloomington District, Bloomington, Friday, June 21.

Indianapolis picnic, Saturday, July 27.

South Bend District, Elkhart, Friday, September 13.

Gary District, Hammond, Friday, October 25.

Columbus District, Columbus, Friday, December 13.

Indianapolis (State Convention), Tuesday, Wednesday, Thursday, January 21, 22, 23, 1930.

**New Furnace Fan Has Double Fan System**

The Silent Servant or the Haynes Furnace Fan is the latest fan to make its appearance in the warm air heating field, and it is manufactured by W. J. Haynes, 326 West 6th Street, Kansas City, Missouri.

The instrument consists of a solid cast iron frame into which are mounted two 4-blade fans.

The motor is installed on the top of the frame outside of the cold air shoe and conveys its motive force to the fans by means of a belt which passes from the motor pulley down to the drive shaft pulley of one fan then across to the drive shaft pulley of the second fan and back to the motor pulley, giving it the shape of a triangle.

The advantages claimed for this fan by the manufacturer are that the motor is removed from the cold air shoe entirely, no louvres are required, the speed of the fans is reduced to 600 r.p.m. and noise is eliminated. Patents have been applied for.

Completed details may be had by writing the company direct.

**Electric Spot Welding on Oven Grates**

From C. C. Coon Sheet Metal Works, Wauseon, Ohio.

Please tell me who does electric spot welding on wire such as on oven grates and chick feeders.

Ans.—Hedstrom Manufacturing Company, 4647 West Lake Street, Chicago.



## WHO'S WHO, WHERE!

**SAN FRANCISCO, CAL.**—The Wierton Steel Co. has engaged in the sheet metal products business at 55 New Montgomery Street.

**TRAVERSE CITY, MICH.**—Arms & Cole, engaged in the sheet metal business at 122 Cass street, have incorporated their business under the same name, with a capital stock of \$36,000.

The Heat Makers Sales Corporation has been incorporated with a capital stock of \$1,000, to handle heating appliances, by Jack F. Young and Bob Henry.

**MINNEAPOLIS, MINN.**—The Day Company, manufacturers of dust collecting apparatus for wood-working and elevator plants, has moved to larger quarters at 3132 Snelling avenue.

**SIOUX CITY, IA.**—The Interstate Cornice Works, 413 Wall street, has the sheet metal work contract for \$30,000 residence of David W. Stewart and \$20,000 residence of Ward T. Hopper.

The Norfolk Furnace Co., East 8th and Division streets, has the warm air heating contracts for residences of G. F. Martin, three in number.

**OAKLAND, CAL.**—The E. W. Anderson Co., 3103 San Pablo Ave., has the sheet metal contract for \$115,000 warehouse of Safeway Stores, Inc.

**WATSONVILLE, CAL.**—The A. P. Beck Plumbing Shop has the sheet metal, roofing and plumbing contracts for rooming house of A. W. Cruson at that point.

**PALO ALTO, CAL.**—The Stanford Sheet Metal Co. has the sheet metal contract for \$25,000 residence of Henry M. Neward, in Los Gatos, Cal.

**OAKLAND, CAL.**—The Sheet Metal Service Co., 2254 East 14th street, has been awarded the sheet metal contract for Sacred Heart Church of Turlock, Cal.

**FRESNO, CAL.**—The Barrett-Hicks Co. has the sheet metal contract for addition to the Masonic Temple, at Coalinga, Cal.

**SAN FRANCISCO, CAL.**—Lowell Davison, 1670 San Jose avenue has the sheet metal contract for J. H. Schwabacher building.

The Guilfooy Cornice Works, 1234 Howard Street, has been awarded the sheet metal contract for the Teachers' College training school unit.

The Metals Construction Co., 51 Perry street, has been awarded the sheet metal work for the store building of J. B. Van Nuys, at 2338 Mission street.

**ELYRIA, O.**—The Fox Furnace Co. of which M. Suppes, 206 Washington Avenue, is Vice-President, has let contracts for foundry and factory building.

**LOS ANGELES, CAL.**—Emil Brown, 300 East 9th street, has the sheet metal and metal covered doors contract for the James Investment Co. store and office building in the Westwood district.

The Arcade Cornice Works, 721 East 12th street, has the sheet metal contract for Inglewood High School, Inglewood, Cal.

The Liberty Tinware Manufacturing Co. has engaged in the sheet metal products business at 1315 East First Street, under the management of J. Bass.

The California Cornice Works, 1620 North Spring street, has been awarded sheet metal contract for Federal Reserve Bank building.

**HUNTINGTON PARK, CAL.**—The Berg Heating & Ventilating Co., 1976 Laura

street, has the contract for ventilating system for the Torrance Theater in Torrance, Cal.

**ATLANTA, GA.**—The Baker Roofing Co., 686 Greenwood Avenue, N. E., has been awarded the sheet metal and roofing contract for B. F. Goodrich Rubber Co. mill in Thomaston, Ga.

**OAKLAND, CAL.**—The Superior Sheet Metal Works, 4400 Market Street, has the sheet metal contract for the manufacturing plant of Western Electric Co. at Emeryville, Cal.

**OAKLAND, CAL.**—The Superior Metal Products Co., 44th and Market Streets, has the sheet metal contract for high school assembly hall at that place.

**PIEDMONT, CAL.**—Christiansen & Grutsch, 4279 Piedmont Avenue, has the sheet metal work on store building of George Silver in Oakland, Cal.

**LOS ANGELES, CAL.**—The Forderer Cornice Works has the contract for double hung windows for the factory of Continental Can Co.

The Payne Furnace & Supply Co., 338 N. Foothill Drive, has the warm air heating contract for residence of Earle C. Anthony.

L. E. Scott has engaged in the sheet metal manufacturing business at 432 Wall Street.

**TORRANCE, CAL.**—Newton L. Hall has engaged in business at 1811 213th Street as Hall Metal Products Co.

**GLENDALE, CAL.**—The Super Service Heater Co. has engaged in business at 212 West Colorado Blvd.

**DES MOINES, IA.**—The Backman Sheet Metal Co., 405 East 2nd Street, has the sheet metal contract for hospital building.

**SAND SPRINGS, OKLA.**—The Nu-Way Furnace Co. has the warm air heating contract for residences of H. R. Moffett, Adams & Redding, Roop & Walters, and G. Horace Anderson, Tulsa, Okla.

**DAVENPORT, IOWA.**—Jens Nielsen, 807 West Fourth Street, has awarded the sheet metal contract on the Science Building, St. Ambrose College, Davenport.

**WATERLOO, IOWA.**—Howard H. Boesen has engaged in the sheet metal business under the name of the General Sheet Metal Works, 824 Columbia Street, and will do general sheet metal contracting, roofing and warm air furnace installing. Mr. Boesen was formerly located at 1353 White Street, Dubuque, Iowa.

**BRIDGEVILLE, PENN.**—The firms of John S. Bowman and H. Poellot's Sons have been consolidated and the firm name is now Bowman, Poellot & Bingham and are located at 512 Washington Avenue. They would like to receive catalogs pertaining to the warm air heating and roofing business.

**PALOUSE, WASH.**—R. C. McClenahan, proprietor of the Inland Body & Fender Shop, will move to Aberdeen, Wash.

**KLAMATH FALLS, ORE.**—W. M. Lorenz has purchased the sheet metal department of Lorenz Company, 123 South Sixth Street.

**MINNEAPOLIS, MINN.**—H. A. Fritz, 927 West Broadway, has the warm air heating contract for bungalow of Hildebrand Bros.

**MANKATO, MINN.**—The Hagen Hardware Company has contract for roofing

and sheet metal work for addition to Junior High School in Fairmont, Minn.

**SPOKANE, WASH.**—The McCaffrey Plumbing Company, 308 Riverside, has the warm air heating contract for residence of Mrs. Pauline McCarthy.

**PORTLAND, ORE.**—The Grand Sheet Metal Works, 60 East Third Street, has the warm air heating contract for school building at Monument, Ore.

**LOS ANGELES, CAL.**—The Arcade Cornice Works has the sheet metal contract for store building of Arthur C. Hurt.

The Main Cornice Works has the sheet metal and ventilating contract for Masonic Club building in Westwood district.

The Phillips Heating & Ventilating Company has been awarded the heating contract for La Verne Church of the Brethren, in La Verne, Cal.

**LINCOLN, NEB.**—Green & McReynolds, 2819 North 48th Street, has been awarded warm air heating contract for residence of W. R. Waln.

**OMAHA, NEB.**—The Howard Stove & Furnace Works, Ralston Street, has the warm air furnace contract for residence of Charles W. Rosenberry.

**ATLANTA, GA.**—The Atlanta Sheet Metal Works, 977 Marietta Street, has the sheet metal and roofing contract for \$450,000 First Baptist Church.

**NEW ORLEANS, LA.**—The Standard Sheet Metal Works, 635 South Peters Street, has contract for sheet metal work on \$1,750,000 criminal court building.

**MANHATTAN, KAN.**—The Manhattan Sheet Metal Company has the heating contract for Wm. G. Hudson Hotel building in Vinita, Okla.

**DALLAS, TEX.**—The Berger Manufacturing Company, 2101 Corinth Street, has the contract for removable pans for the Hotel Lubbock building at Lubbock, Tex.

**HOUSTON, TEX.**—Blumenthal Brothers, 1708 Congress Avenue, have been awarded sheet metal contract for \$110,000 addition to John Marshall High School there.

**FREEMONT, ILLINOIS.**—J. L. Willey will enter the sheet metal and warm air heating business in the near future and would like to receive catalogs from manufacturers on furnaces, fittings, and sheet metal products, together with price lists.



Metal Branch, National Hardware Association, annual meeting, Statler Hotel, Detroit, Michigan, May 16 and 17, 1929. Chairman F. O. Schoedinger, Columbus, Ohio.

National Association of Sheet Metal Contractors of the United States, Lord Baltimore Hotel, Baltimore, Maryland, June 3 to 7, 1929. Secretary, W. C. Markle, 336 Fourth Avenue, Pittsburgh, Pennsylvania.

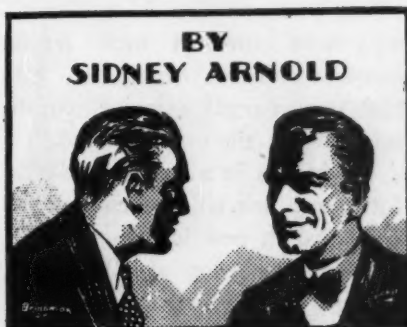
American Society of Heating and Ventilating Engineers semi-annual meeting, Bigwin Inn, Lake-of-Bays, Ontario, Canada, June 26 to 28, 1929. Headquarters of society 29 West 39th Street, New York City.



# RANDOM NOTES AND SKETCHES

I'm going to step into the role of National sheet metal convention in fatherly adviser and "tip" some of you "birds" who are going to the Baltimore next month off and wise you up on where to look and who to see to get what you want in Baltimore. And in order to save your time, I am including herewith a list of the names of the Baltimore Sheet Metal Contractors' local association. You will note that opposite each name there appears the name of the sport in which that individual excels. Some of my readers might also be inclined to the idea that W. Hering is a "dead" one because the word "flowers" appears after his name. I want to assure you that such is far from the case. Also "Old Reliable" after W. D. Ludwig means good for anything. With this group of "experts" to guide you in the ways that you should go, there is little doubt about the kind of a time you are going to have. But if it should happen that you don't have a good time, I'm afraid that it will be your own fault. Well, then read 'em and weep:

W. A. Fingles, Sr., roller skating.  
P. H. Lenderking, shrubbery.(?)  
E. J. Ward, radio.  
J. J. Cotton, boating.  
W. F. Zeller, Sr., pinochle.  
W. E. Cotton, Sr., baseball.  
M. A. Seiler, house tennis.  
J. L. Hagger, bowling.  
J. B. Hiss, tennis.  
C. E. Brandt, water sports.  
J. E. LaMotte, auto (speed).  
S. O. Bevans, ventilation.  
W. G. Blandford, literature.  
H. C. Gunther, stag party host.  
W. D. Ludwig, old reliable.  
C. T. Brandt, Sr., touring.  
G. E. Trautner, fishing.  
W. A. Fingles, Jr., golf.  
W. Hering, flowers.



Roy Danzer, orator (spellbinder).  
R. N. Francis, general mixer.  
(??)

I had a most agreeable surprise on Friday morning of this week when I was honored with a visit from W. A. Fingles, Jr., vice-president of W. A. Fingles, Inc., Baltimore, Maryland, and William Hering, chairman of the Convention Program Committee of the National Association of Sheet Metal Contractors, who came from Detroit to Chicago on business. I was certainly more than pleased to make the personal acquaintance of these two gentlemen and appreciated their coming in to see me as they did. They both stated that everything is going along fine toward the making of the approaching national convention one of the most interesting that has ever been held, and both extended a very hearty invitation to all sheet metal contractors to attend.

A. E. Randolph, President and General Manager of the Rudy Furnace Company, Dowagiac, Michigan, has returned from a motor trip to the west coast. He reports that he had a splendid trip.



Lies here the body of Mary Brown,  
For her life held no terrors,  
A virgin born, a virgin dead—  
No runs, no hits, no errors.

\* \* \*

## The Fugiting of Tempus

George I. Ray, Charlotte, N. C.:  
What time do we get to New York,  
George?

Porter: We is due there at 1:15,  
unless you has set your watch by  
Eastern time, which would make it  
2:15. Ob co'se, if you-all is goin'  
by daylight savings time it would  
be 3:15 unless we is an hour an'  
fifty minutes late—which we is.

\* \* \*

Homer Selch, Indianapolis, on a  
train speeding southward last winter  
was intensely thirsty for a drink  
of ice water, the water cooler in the  
Pullman being out of commission.  
Homer rang for the porter and said  
to him:

"George, I'll give you a dollar if  
you'll get me a drink of ice water."

"Ah'll try," said the compliant  
negro, who returned with the desired  
ice water. Homer, at regular  
intervals of thirty minutes, requested  
the porter to bring him ice water  
until about five o'clock the porter  
came in with a dubious look on his  
face and said:

"Boss, this am positively the last  
drink Ah can bring yuh, 'cause  
them fish in the baggage car am  
begginnin' to smell already."

\* \* \*

W. D. Martin, Jr., American  
Brass Co., Kenosha—"Yes, I want  
an office boy. Do you smoke?"

Boy—"No, thank you, sir, but I  
don't mind having an ice cream  
cone."

\* \* \*

"Every time I kiss you it makes  
me a better man."

"Well, you don't have to try to  
get to heaven in one night."

## Steel Production Undiminished—Price Advance for Third Quarter Possible

### No Spectacular Event in Non-Ferrous Metals Market

**S**TEEL production is undiminished, but a slight decline in the volume of specifications has been reflected in a proportionate shortening of deliveries, says the *Iron Age*. It adds:

"To expect the flow of shipping orders to be maintained at an unchanged rate would be to ignore the fact that, in some cases, consumers have already specified fully against contracts for the current quarter.

"Mill books for the third quarter have not yet been opened, except for contracts subject to prices ruling at time of delivery, and buyers, as a rule, have not yet entered the market for that period.

"No definite announcement regarding third quarter quotations has been made by producers, but advances in sheets, bars, plates and shapes are freely mentioned as possibilities.

"Such a move, coupled with any uncertainty among consumers regarding money market influences, might retard contracting, it is said, with resulting further reduction in mill backlogs.

"Lulls between buying movements, thought hardly distinguishable of late, have been familiar market developments, but they throw little light on the rate of steel consumption.

"The unfilled tonnage report of the United States Steel Corporation as of April 30, to be issued soon, is expected to show a gain over the preceding month.

"Prices in various lines are steady, with third quarter advances being predicted. Chicago makers of bars and plates are so well engaged that a steady third quarter output is nearly assured. As a result a price advance at this time would mean little until late in the summer months at least."

Fill-in tonnages from melters

who have estimated their second quarter tonnages closely, or who find requirements growing, constitute most of the orders placed.

Pig iron is in a steady market at Pittsburgh, but no outstanding sales are noted in new business, following the transaction of 20,000 tons of basic iron reported several days ago. The usual light mid-quarter activity prevails, but furnace operations are well sustained.

April shipments were at a record level for some furnaces and in practically all instances iron was shipped as rapidly as produced.

Stocks in general continue to decline and some furnaces have little additional tonnage to offer over the balance of the quarter.

Although some talk is heard of a scarcity during ensuing months, such a condition does not exist as yet. In view of the sold-up condition of a number of furnaces, however, it is believed it would be difficult to purchase a large tonnage for prompt shipment.

This argument is advanced to explain the \$18.50 price paid on the recent large sale of basic iron.

#### Copper

For the first quarter of 1929 the company received an average price of 18 cents a pound for metal sold and the average for the first half of the year is expected to exceed that price and will compare with an average of 14.81 cents for the year 1928.

Copper production of the Phelps Dodge Corporation is averaging 20,000,000 pounds monthly. There were 204,273,993 pounds actually produced in 1928.

Orders on hand aggregate more than 50,000,000 pounds and cover the company's entire production well into July.

Copper was being quoted at unchanged prices in a quiet market.

Sales for export were light and domestic buying almost negligible. Demand from day to day is sufficient, however, to balance the custom smelter intake.

Prices are steady, with electrolytic copper quoted 18.00c delivered Connecticut, 18.12½c Middle West and 17.90c refinery. Casting copper is held at 17.62½c and lake copper commands 18.00c to 18.12½c, delivered.

Shipments of copper against old orders are holding at a high rate, running into July, so producers still are in a strong position.

Copper quotations in London continue well above prices prevailing there in late April.

#### Zinc

Zinc prices are unchanged and demand is quiet, although some business was reported done at prices as high as 6.65c East St. Louis.

Quotations on prime western zinc are 6.60c East St. Louis and 6.95c New York. Brass special is quoted 6.70c East St. Louis, and high grade is held at 8.00c delivered.

#### Tin

Straits tin was quoted early at 44.75c on spot, compared with a previous price at 44.12½c to 44.25c on spot. The market became easy when more sellers appeared than buyers.

Buying of tin was moderate and mostly for future positions.

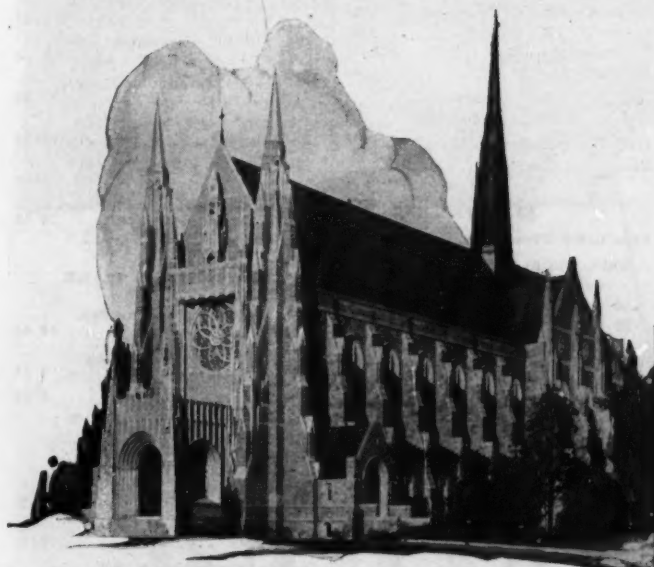
#### Lead

Lead prices were easy, the market being quoted 6.75c to 6.80c East St. Louis, but with nearly all producers still quoting the higher level.

Some second hand metal is being offered at less than producers' prices. The situation in general is unchanged and fairly steady, with large shipments of metal going into consumption. Much buying for June requirements is expected soon.



# "Anaconda Copper going fine in this community"



The beautiful new St. Mary's Roman Catholic Church, Stamford, Conn., on which 20,000 lbs. of Anaconda Sheet Copper was used. A typical Shelton Roofing Company installation.

—*Shelton Roofing Company,  
Sheet Metal Contractors  
of Ansonia, Conn.*



Shop of the Shelton Roofing Company, Ansonia, Conn.  
Left to right: George Holbink, Edward Greenberger,  
Herman Greenberger, E. C. Hallstein, David Moriarty.

**A**NACONDA Copper goes fine in any community, when an enthusiastic firm like the Shelton Roofing Company takes hold. They decided to use Anaconda years ago in Ansonia, Conn., and today their reputation for fine work is securing for them big jobs in other cities as well. They sell the combination of their experience, craftsmanship and quality materials on the strength of the long life and low upkeep cost of the installation. What they have to say about the part Anaconda Copper has played in their business development is worth reading:—

"Anaconda Copper is going fine in this community—largely because we started talking about the advantages of Anaconda several years ago. We are doing about all the business we can take care of—and it's a better class of business, too. We are even landing people who used to think a copper job was beyond their means. It's easy to convince them that Anaconda stands for true economy. Practically everybody we sell becomes a booster for Anaconda Copper. We'll say it pays to sell a trademarked, advertised brand of copper that backs up your claims."

Anaconda Sheet Copper is manufactured with the highest metallurgical skill by the world's largest and most experienced producers of Copper, Brass and Bronze. Its uniform quality and easy workability are due to scrupulous care attending every stage of manufacture from mine to finished product.

Stocks of Rolls, Economy Strips and flat sheets of uniform gauge are maintained by leading distributors, assuring prompt deliveries to all sections of the country.

## THE AMERICAN BRASS COMPANY

General Offices: Waterbury, Connecticut

Offices and Agencies located in all the Principal Cities  
Canadian Mill: ANACONDA AMERICAN BRASS LTD.,  
New Toronto, Ontario

## Sheet Metal Work of ANACONDA COPPER



Look for the name ANACONDA in every sheet and strip. Leading Supply Houses carry it.

When writing mention AMERICAN ARTISAN—Thank you!

# Chicago Warehouse Metal and Furnace Supply Prices

AMERICAN ARTISAN is the only publication containing Western Metal, Furnace Supply and Hardware prices corrected weekly

## METALS

### FIG IRON

Chicago Fdy.,	
No. 2	\$20 00
Southern Fdy. No. 2	21 51
Lake Superior Charcoal	27 04
Malleable	20 00

### FIRST QUALITY BRIGHT CHARCOAL TIN PLATES

IC 20x28 112 sheets	\$23 50
IX 20x28	25 50
IXX 20x28 66 sheets	14 50
IXXX 20x28	15 00
IXXXX 20x28	17 00

### TERNE PLATES

IC 20x28, 40-lb. 112 sheets	\$26 70
IX 20x28, 40-lb. 112 sheets	29 70
IC 20x28, 25-lb. 112 sheets	22 20
IX 20x28, 25-lb. 112 sheets	25 20
IC 20x28, 20-lb. 112 sheets	20 25
IX 20x28, 20-lb. 112 sheets	23 00

### "ARMCO" INGOT IRON PLATES

No. 8 ga.—100 lbs.	\$4 15
3/16 in.—100 lbs.	4 05
1/4 in.—100 lbs.	3 85

### COKE PLATES

Cokes, 80 lbs., base, 20x28	\$12 00
Cokes, 90 lbs., base, 20x28	12 30
Cokes, 100 lbs., base, 20x28	12 40
Cokes, 107 lbs., base, IC	12 75
20x28	
Cokes, 155 lbs., base, IX	14 75
20x28	
Cokes, 155 lbs., base, 3X,	8 50
56 sheets	
Cokes, 175 lbs., base 3X,	9 35
56 sheets	
Cokes, 195 lbs., base 4X,	10 25
56 sheets	

Base 10 ga.—per 100 lbs.	\$3 25
"Armco" 10 ga.—per 100 lbs.	4 15

### ONE PASS COLD ROLLED

No. 18-20	per 100 lbs. \$3 85
No. 22	per 100 lbs. 4 00
No. 24	per 100 lbs. 4 05
No. 26	per 100 lbs. 4 15
No. 27	per 100 lbs. 4 20
No. 28	per 100 lbs. 4 30
No. 29	per 100 lbs. 4 45
No. 30	per 100 lbs. 4 55

### "ARMCO" GALVANIZED

"Armco" 24.—per 100 lbs.	\$6 15
--------------------------	--------

### GALVANIZED

No. 16	per 100 lbs. \$4 40
No. 18	per 100 lbs. 4 55
No. 20	per 100 lbs. 4 70
No. 22	per 100 lbs. 4 75
No. 24	per 100 lbs. 4 90
No. 26	per 100 lbs. 5 15
No. 27	per 100 lbs. 5 25
No. 28	per 100 lbs. 5 40
No. 30	per 100 lbs. 5 80

### BAR SOLDER

Warranted 50-50 per 100 lbs.	\$31 25
48-52	per 100 lbs. 30 50
45-55	per 100 lbs. 29 25
Plumbers'	per 100 lbs. 27 25

### ZINC

In Slabs	\$ 7 35
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### SHEET ZINC

Cask Lots (600 lbs.)	\$11 75
Sheet Lots	12 75

### BRASS

Sheets, Chicago base	24 1/2 c
Mill base	23 1/2 c
Tubing, brazed, Chicago base	31 1/2 c
Mill base	30 1/2 c
Tubing, seamless, Chicago	29 1/2 c
base	28 1/2 c
Mill base	28 1/2 c
Wire, Chicago base	24 1/2 c
Mill base	23 1/2 c
Rods, Chicago base	22 1/2 c
Mill base	21 1/2 c

### COPPER

Sheets, Chicago base	27 1/2 c
Mill base	26 1/2 c
Tubing, seamless, Chicago	30 1/2 c
base	29 1/2 c
Mill base	29 1/2 c
Wire, plain rd., 8 B. & S. Ga.	
and heavier	25 1/2 c

## LEAD

American Pig	\$7 85
Bar	8 85

## TIN

Bar Tin	per 100 lbs. \$51 00
Pig Tin	per 100 lbs. 50 00

## HARDWARE, SHEET METAL SUPPLIES, WARM AIR FURNACE FITTINGS AND ACCESSORIES.

### ASBESTOS

Paper up to 1/16	6c per lb.
Roll board	7 1/2 c per lb.
Mill board 3/32 to 1/2	7 1/2 c per lb.
Corrugated Paper (250 sq. ft. to roll)	\$6 00 per roll

### BRUSHES

Furnace Pipe Cleaning	
Bristle with handle each	\$0 75
Flue Cleaning	
Steel only, each	1 25

### CEMENT, FURNACE

American Seal, 5-lb. cans, net	\$ 45
American Seal, 10-lb. cans, net	85
American Seal, 25-lb. cans, net	2 25
Pecora	per 100 lbs. 7 50

### CHIMNEY TOPS

Adams' Revalving	
4 in.	21 lbs. \$11 00
6 in.	24 lbs. 11 50
7 in.	30 lbs. 12 50
8 in.	35 lbs. 15 00
9 in.	51 lbs. 16 50
10 in.	56 lbs. 18 00
12 in.	66 lbs. 22 00
14 in.	110 lbs. 36 00

### CLINKER TONGS

Each	\$1 50
------	--------

### CLIPS

Damper	
No-Rivet Steel, with tail	
pieces, per gross	\$9 10
Rivet Steel, with tail	
pieces, per gross	7 50
Tail pieces, per gross	2 40

### COPERS—Soldering

Pointed Roofing	
3 lb. and heavier	per lb. 40c
2 1/2 lb.	per lb. 45c
2 lb.	per lb. 48c
1 1/2 lb.	per lb. 55c
1 lb.	per lb. 60c

### CORNICE BRACKETS

Chicago Steel Bending	
Nos. 1 to 6B	Net

### CUT-OFFS

Gal. plain, round or cor. rd.	
26 gauge	30 1/2 c
28 gauge	35 1/2 c

### DAMPERS

Yankee Hot Air	
7 inch, doz.	\$1 60
8 inch, doz.	2 20
9 inch, doz.	2 60
10 inch, doz.	2 80
12 inch, doz.	3 50
14 inch, doz.	5 00

### ADAMS No. 1 CHECK

Check and Collar Complete	
3 inch, each	2 00
5 inch, each	2 25
End Check Only	
3 inch, each	1 60
5 inch, each	1 85
Collar Only	
3 inch, each	50
5 inch, each	65

### No. 2 CHECK

3 inch, each	1 00
5 inch, each	1 00
10% Disc. on Adams No. 1	
and No. 2 Check	
Diamond Smoke Pipe	
7 inch, doz.	\$2 00
8 inch, doz.	3 20
9 inch, doz.	4 80
10 inch, doz.	6 00

## Adams' Sheet Metal

7 inch, doz.	\$1 60
8 inch, doz.	2 20
9 inch, doz.	2 60
10 inch, doz.	2 80
12 inch, doz.	3 50
14 inch, doz.	5 00

## EAVES TROUGH

Galv. Crimpedge, crated	75-10%
Zinc, "Barnes"	60%

## ELBOWS

Conductor Pipe	
Galv. plain or corrugated, round flat Crimp,	
28 Gauge	60%
26 Gauge	45%
24 Gauge	15%

## Galv. Terne Steel

Plain Rd. and Rd. Corr.	
28 Ga.	60%
26 Ga.	45%
24 Ga.	15%

## Square Corrugated

No. 28 Gauge	50%
26 Gauge	35%

## Portico Elbows

Standard Gauge Conductor Pipe, plain or corrugated.	
Not nested	70 & 5%
Nested Solid	70 & 5%

## Sq. Corr., A. & B. & Octagon

28 Ga.	50%
26 Ga.	35%

## Portico

1", 1 1/4", 1 1/2"	45%
--------------------	-----

## Copper

16 oz., all designs	40%
---------------------	-----

## Zinc

All styles	60%
------------	-----

## ELBOWS—Steve Pipe

1-piece Corrugated, Uniform Blue	
"Milcor" No. 28 Gauge. Doz.	
5-inch	\$1 15
6-inch	1 25
7-inch	1 75

## Special Corrugated

6-inch	\$1 00
7-inch	1 50

## Adjustable—Uniform Blue

"Milcor" No. 28 Gauge. Uniform Blue.	
5-inch	\$1 60
6-inch	1 75
7-inch	2 10

## WOOD FACES—60% off list.

## FENCE

726-6-12 1/2% (100 rods)	\$28 65
1948-6-14 1/2% (100 rods)	43 62

## FILES AND RASPS

Heller's (American)	50-10%
American	60-10%
Arcade	50%
Black Diamond	50%
Eagle	50%
Great Western	50%
Kearney & Foot	50%
McClellan	50%
Nicholson	50%
Simonds	50%

## FIRE POTS

Geo. W. Diener Mfg. Co.	Ma.
No. 02 Gasoline Torch, 1 qt.	\$ 5 13
No. 9250, Kerosene, or Gasoline Torch, 1 qt.	6 50
No. 10 Tinner's Furn.	
Square tank, 1 gal.	11 20
No. 15 Tinner's Furn.	
Round tank, 1 gal.	10 70
No. 21 Gas Soldering Furn.	8 00
No. 110 Automatic Gas Soldering Furnace	10 50

## GALVANIZED WARE

Pails (Galv. after made), 10-qt.	\$3 00
Tubs (Galv. after made), No. 1	5 75
No. 2	6 50

## GLASS

Single Strength, A, all brackets	85%
Single Strength, B, all brackets	87%
Double Strength, A, all brackets	85%
Double Strength, B, all brackets	87%

## HANGERS

Conductor Pipe	
Milcor Perfection Wire	35%
Milcor Triplex Wire	10%
Eaves Trough	
Milcor Steel (galv. after forming) from List	50%
Milcor Selflock E. T. Wire, List	10%

## HOOKS

Conductor	
"Direct Drive" Wrought Iron for wood or brick	15%

## HUMIDIFIER

"Front-Range" Automatic	
In single lots	50%
In lots of 10 or more	50-5%
In lots of 25 or more	50-10%
Vapor pans, etc., each	50%

## LIFTERS

Stove Cover	
Coppered	per gro. \$8 00
Alaska	per gro. 4 70

## MALLETS

Tinners	
Hickory	per doz. \$3 35

## MITRES

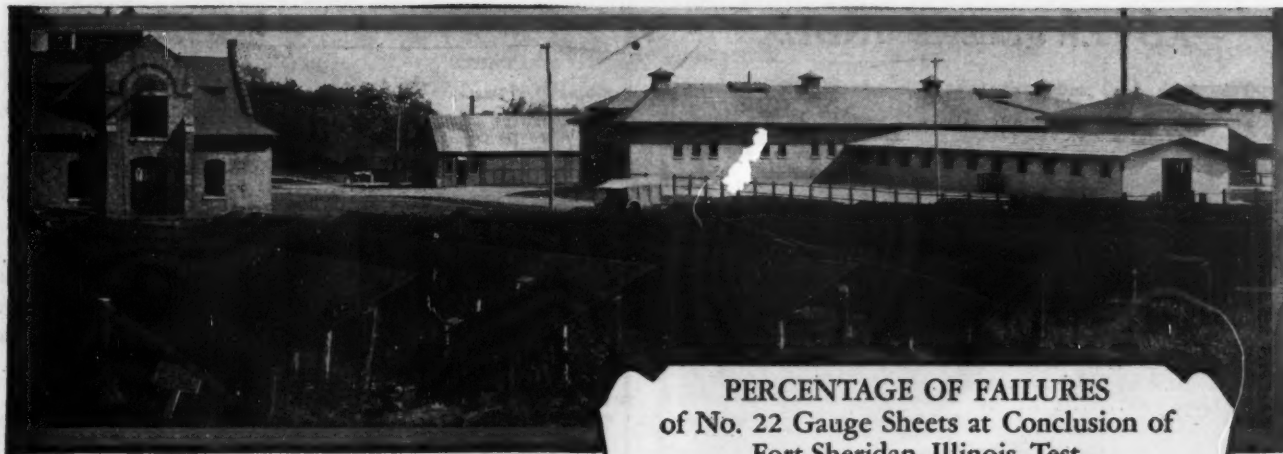
Galvanized steel mitres	
28 Ga.	70
26 Ga.	60-20

## NAILS

Cut Steel, base	\$4 00
Wire	
Common	\$3 10
Cement Coated	3 14

(Continued on page 72)

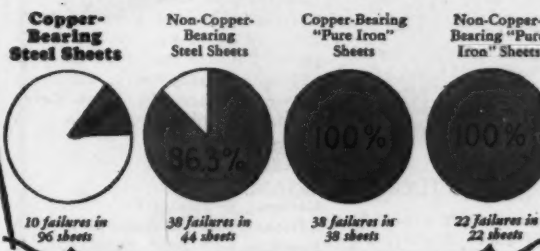




STEEL SHEETS ON TEST RACKS AT  
FORT SHERIDAN, ILL.

For more than 11 years rain, snow, sun and dew conspired to destroy the steel sheets exposed under the auspices of the American Society for Testing Materials at this large testing ground. The result of this test supplied us with the FACTS of longer life and greater service which we are constantly passing on to you.

PERCENTAGE OF FAILURES  
of No. 22 Gauge Sheets at Conclusion of  
Fort Sheridan, Illinois, Test



# INLAND *Copper Alloy* STEEL SHEETS

The chart above tells only part of the story. The user should know that if the test had ended six months earlier, it would have left all of the copper bearing steel sheets intact, as the first failure appeared only at the final inspection. The user should know also that the first failure took place in the non-copper-bearing steel sheets at 32 months, in non-copper-bearing "pure iron" at 48, in copper bearing "pure iron" at 101—and not until 132 months in the copper bearing steel sheets.

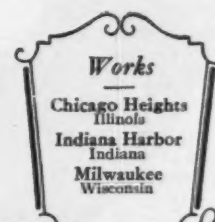
A study of the official report on this test shows that copper bearing steel sheets were superior in resisting corrosion and that they lasted three to five times as long as other sheets.

The whole story of INLAND *Copper Alloy* STEEL SHEETS is presented in complete and interesting fashion in our booklet. Ask for it.

Contributing Member Sheet Steel Trade Extension Committee.



INLAND STEEL COMPANY  
38 South Dearborn Street  
Chicago



SHEETS BARS PLATES SHAPES RAILS TRACK ACCESSORIES RIVETS BILLETS

Say you saw it in AMERICAN ARTISAN—Thank you!





**PERFORATED METALS**

All Sizes and Shapes of Holes  
In Steel, Zinc, Brass, Copper, Tinplate, etc.  
For All Screening, Ventilating and Draining  
EVERYTHING IN PERFORATING METAL

**THE HARRINGTON & KING PERFORATING CO.**

5649 FILLMORE ST.-CHICAGO, ILL. U. S. A.  
NEW YORK OFFICE: 114 LIBERTY ST.

The **NEW IMPROVED** **"STANDARD"**  
TRADE MARK REG.



**Rotable Ventilator**

*Now made of Armco Iron*

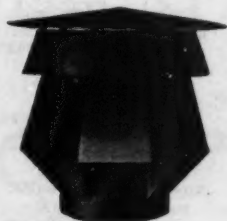
This favorite cone-shaped ventilator is now improved in several important points.

The weight of the ventilator body is now carried on a concave thrust bearing nested in the apex of the conical body. This bearing turns upon the pivot point of the stationary center spindle.

The bronze Guide Bushings are now made of non-corrosive bronze which minimizes friction and any tendency to screech when body is rotating.

There are other new features. Write today for new catalog and price list.

**STANDARD VENTILATOR CO., Lewisburg, Pa.**



The 12-Cylinder Ventilator  
Used in Every State  
in the Union.

**SPECIFY ÆOLUS  
VENTILATORS**

**ÆOLUS  
FOR HOMES**

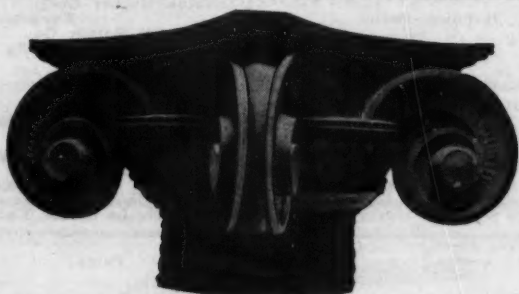
The home should be properly ventilated—few of them are. Here is a sales opportunity often overlooked by the average Sheet Metal Worker, but one which offers a lucrative business to those who take advantage of it.

**Æolus-Dickinson**

*Vent. Makers Since 1888*

3332-52 South Artesian Avenue  
CHICAGO

Phone: Lafayette 1862-1863



**GEROCK BROS. MFG. CO.  
SHEET METAL ORNAMENTS  
AND STATUARY**

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Write for Catalogue

Round  
Corrugated



Plain Round



NEVER MADE WITHOUT THIS

TRADE **F. Dieckmann** MARK

*Quality and Service Made 'em Famous*

Made of one piece of heavy gauge material, in all styles and angles from 10 to 90 degrees, of 24, 26, 28 ga. ternes, then galvanized after formation.

**DIECKMANN  
Elbows and Shoes**  
*are the standard of the market  
and always give satisfaction*

Send for new catalogue 26 showing complete line

**The Ferdinand Dieckmann Co.**

P. O. Station B, Cincinnati, O.

Square  
Corrugated  
Style A



Square  
Corrugated  
Style  
B



Not made lighter than  
28 ga. or 16 oz. copper

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**Air Cleaners.**  
Meyer & Bro. Co., F., Peoria, Ill.

**Asbestos Paper.**  
Sall-Mountain Co., Chicago, Ill.

**Ball Joints.**  
Alfred C. Goethal Co., Milwaukee, Wis.

**Benchies—Steel.**  
Maplewood Machinery Co., Chicago, Ill.

**Blast Gates.**  
Alfred C. Goethal Co., Milwaukee, Wis.

**Blow Pipe Fittings.**  
Alfred C. Goethal Co., Milwaukee, Wis.

**Bolts—Stove.**  
The Kirk-Latty Co., Cleveland, Ohio  
Lamson & Sessions Co., Cleveland, Ohio  
Ryerson & Son, Inc., Jos. T., Chgo., N. Y., St. L., Det., Cleve.

**Brakes—Bending.**  
Dreis & Krump Mfg. Co., Chicago, Ill.  
Ryerson & Son, Inc., Jos. T., Chgo., N. Y., St. L., Det., Cleve.

**Brakes—Cornice.**  
Dreis & Krump Mfg. Co., Chicago, Ill.

**Brass and Copper.**  
American Brass Co., Waterbury, Conn.  
Copper & Brass Research Association, New York

**Cans—Garbage.**  
Osborn Co., The J. M. & L. A., Cleveland, Ohio

**Castings—Malleable.**  
Fanner Mfg. Co., Cleveland, Ohio

**Cellings—Metal.**  
Eller Manufacturing Co., Canton, Ohio  
Milwaukee Corrugating Co., Mil., Ch'go, La Crosse, Kan. City

**Chaplets.**  
Fanner Mfg. Co., Cleveland, Ohio

**Chimney Tops.**  
Standard Ventilator Co., Lewisburg, Pa.

**Cleaners—Vacuum.**  
Brillion Furnace Co., Brillion, Wis.  
Gottschalk Heating Co., Covington, Ky.  
National Super Service Co., Toledo, Ohio

**Copper.**  
American Brass Co., Waterbury, Conn.  
Copper & Brass Research Association, New York

**Cornices.**  
Eller Manufacturing Co., Canton, Ohio  
Milwaukee Corrugating Co., Mil., Ch'go, La Crosse, Kan. City

**Cut-offs—Rain Water.**  
Milwaukee Corrugating Co., Mil., Ch'go, La Crosse, Kan. City

**Dampers—Quadrants—Accessories.**  
Milwaukee Corrugating Co., Mil., Ch'go, La Crosse, Kan. City  
Parker-Kalon Corp., New York, N. Y.

**Damper Regulators.**  
National Regulator Co., Chicago, Ill.  
H. M. Sheer Co., Quincy, Ill.

**Dies—Punch & Press.**  
La Salle Machine Works, Chicago, Ill.

**Diffuser—Air Duct.**  
Aeolus-Dickinson Co., Chicago, Ill.

**Doors—Metal.**  
Lupton's Sons Co., David, Philadelphia, Pa.

**Drive Screws—Hardened Metallic.**  
Parker-Kalon Corp., 200 Varick St., New York

**Eaves Trough.**  
Barnes Metal Products Co., Chicago, Ill.  
Berger Bros. Co., Philadelphia, Pa.  
Lupton's Sons Co., David, Philadelphia, Pa.  
Milwaukee Corrugating Co., Mil., Ch'go, La Crosse, Kan. City  
New Jersey Zinc Sales Co., The, New York, N. Y.

**Elbows and Shoes—Conductor.**  
Barnes Metal Products Co., Chicago, Ill.  
Dieckmann Co., Ferdinand, Cincinnati, Ohio  
Lupton's Sons Co., David, Philadelphia, Pa.  
Milwaukee Corrugating Co., Mil., Ch'go, La Crosse, Kan. City

**Wood Faces—Warm Air.**  
Auer Register Co., Cleveland, Ohio  
American Wood Register Co., Plymouth, Ind.  
Milwaukee Corrugating Co., Mil., Ch'go, La Crosse, Kan. City

**Fittings—Conductor.**  
Barnes Metal Products Co., Chicago, Ill.  
Milwaukee Corrugating Co., Mil., Ch'go, La Crosse, Kan. City

**Flanges.**  
Chicago Metal Mfg. Co., Chicago, Ill.

**Fittings—Steel Pipe.**  
Chicago Metal Mfg. Co., Chicago, Ill.

**Flue Thimbles.**  
Milwaukee Corrugating Co., Mil., Ch'go, La Crosse, Kan. City

**Furnace Cement—Asbestos.**  
Connors Paint Mfg. Co., Wm., Troy, N. Y.  
Milwaukee Corrugating Co., Mil., Ch'go, La Crosse, Kan. City

**Furnace Cement—Liquid.**  
Technical Products Co., Pittsburgh, Pa.

**Furnace Cleaners—Suction.**  
Brillion Furnace Co., Brillion, Wis.  
Gottschalk Heating Co., Covington, Ky.  
National Super Service Co., Toledo, Ohio

**Furnace Fans.**  
A-C Mfg. Co., Pontiac, Ill.  
Canton Furnace & Mfg. Co., Canton, Ohio  
A. H. Robinson Co., Massillon, Ohio  
Warm Air Furnace Fan Co., The, Cleveland, Ohio

**Furnace Fuse.**  
National Regulator Co., Chicago, Ill.

**Furnace Regulators.**  
National Regulator Co., Chicago, Ill.  
H. M. Sheer Co., Quincy, Ill.

**Furnace Rings.**  
Forest City-Walworth Run Foundries Co., Cleveland, Ohio  
Milwaukee Corrugating Co., Milwaukee, Wis.

**Furnaces—Warm Air.**  
Agricola Furnace Co., Gadsden, Ala.  
American Furnace Co., St. Louis, Mo.  
Brillion Furnace Co., Brillion, Wis.  
Canton Furnace & Mfg. Co., Canton, Ohio  
Colburn Heater Co., Chicago, Ill.  
Emrich Co., C., Columbus, Ohio  
Farris Furnace Co., Springfield, Ill.  
Floral City Heater Co., Monroe, Mich.  
Forest City-Walworth Run Fdy., Cleveland, Ohio  
Fox Furnace Co., Elyria, Ohio  
Henry Furnace & Fdy. Co., Cleveland, Ohio  
Hess-Snyder Co., Massillon, Ohio  
Homer Furnace Co., Coldwater, Mich.  
Lennox Furnace Co., Marshalltown, Ia.; Syracuse, N. Y.  
Magirl Foundry & Furnace Co., P. H., Bloomington, Ill.  
May Flebeger Furnace Co., Newark, Ohio  
Marshall Furnace Co., Marshall, Mich.  
Meyer Furnace Co., The, Peoria, Ill.  
Midland Furnace Co., Columbus, Ohio  
Mt. Vernon Furnace & Mfg. Co., Mt. Vernon, Ill.  
Premier Warm Air Heater Co., Dowagiac, Mich.  
Richardson & Boynton Co., New York, N. Y.  
Robinson Co., A. H., Massillon, Ohio  
Success Heater Mfg. Co., Des Moines, Ia.  
XXth Century Heating & Ventilating Co., Akron, Ohio  
Waterman-Waterbury Co., Minneapolis, Minn.  
Western Steel Products Co., Duluth, Minn.  
Wise Furnace Co., Akron, Ohio

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Hart & Cooley Co., New Britain, Conn.  
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**Grilles—Stove Front.**  
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Berger Co., L. D., Philadelphia, Pa.  
Horan Stay Hanger Co., Louisville, Ky.  
Lupton's Sons Co., David, Philadelphia, Pa.  
Milwaukee Corrugating Co., Mil., Ch'go, La Crosse, Kan. City

**Heat Regulation Systems.**  
National Regulator Co., Chicago, Ill.

**Heaters—Cabinet.**  
Fox Furnace Co., Elyria, Ohio  
Waterman-Waterbury Co., Minneapolis, Minn.

**Heaters—School Room.**  
Floral City Heater Co., Monroe, Mich.  
Meyer Furnace Co., The, Peoria, Ill.  
Waterman-Waterbury Co., Minneapolis, Minn.

**Hotels.**  
Fort Shelby Hotel, Detroit, Mich.

**Humidifiers.**  
Meyer & Bro. Co., F., Peoria, Ill.

**Lath—Expanding Metal.**  
Milwaukee Corrugating Co., Mil., Ch'go, La Crosse, Kan. City

**Machines—Crimping.**  
Bertsch & Co., Cambridge City, Ind.

**Machinery—Culvert.**  
Bertsch & Co., Cambridge City, Ind.

**Machines—Tin Smith's.**  
Bertsch & Co., Cambridge City, Ind.  
Dreis & Krump Mfg. Co., Chicago, Ill.  
Interstate Machinery Co., Chicago, Ill.  
La Salle Machine Works, Chicago, Ill.  
Maplewood Machinery Co., Chicago, Ill.  
Marshalltown Mfg. Co., Marshalltown, Iowa  
Osborn Co., The J. M. & L. A., Cleveland, Ohio  
Peck, Stow & Wilcox Co., Southington, Conn.  
Ryerson & Son, Inc., Jos. T., Chgo., N. Y., St. L., Det., Cleve.  
Hyro Mfg. Co., New York, N. Y.

**Mandrels.**  
**Metals—Perforated.**  
Harrington & King Perforating Co., Chicago, Ill.

**Miters.**  
Friedley-Voshardt Co., Chicago, Ill.  
Milwaukee Corrugating Co., Mil., Ch'go, La Crosse, Kan. City

**Miters—Eaves Trough.**  
Barnes Metal Products Co., Chicago, Ill.  
Lupton's Sons Co., David, Philadelphia, Pa.  
Milwaukee Corrugating Co., Mil., Ch'go, La Crosse, Kan. City

**Nails—Hardened Masonry.**  
Parker-Kalon Corp., New York, N. Y.

**Oil Burners.**  
McIlvaine Burner Corp., Evanston, Ill.  
Northern Oil Burner Co., Minneapolis, Minn.  
Preferred Oil Burners, Inc., Peoria, Ill.

**Ornaments—Sheet Metal.**  
Friedley-Voshardt Co., Chicago, Ill.  
Gerock Bros. Mfg. Co., St. Louis, Mo.  
Milwaukee Corrugating Co., Mil., Ch'go, La Crosse, Kan. City

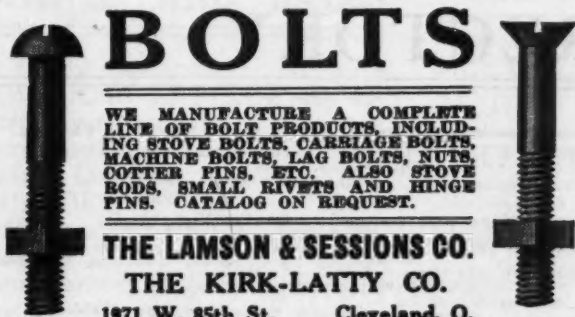
**Paint.**  
Connors Paint Mfg. Co., Wm., Troy, N. Y.

**Patterns—Furnace and Stove.**  
Cleveland Castings Pattern Co., Cleveland, Ohio  
Quincy Pattern Co., Quincy, Ill.  
Yedder Pattern Works, Troy, N. Y.

(Continued on page 76)

Mention AMERICAN ARTISAN in your reply—Thank you!





## BOLTS

WE MANUFACTURE A COMPLETE LINE OF BOLT PRODUCTS, INCLUDING STOVE BOLTS, CARRIAGE BOLTS, MACHINE BOLTS, LAG BOLTS, NUTS, COTTER PINS, ETC. ALSO STOVE RODS, SMALL RIVETS AND HINGE PINS. CATALOG ON REQUEST.

**THE LAMSON & SESSIONS CO.  
THE KIRK-LATTY CO.**

1971 W. 85th St.      Cleveland, O.



## TREADLE SHEAR

This TREADLE GAP SHEAR is made in all standard sizes for No. 14 and lighter gauge sheets. With it, sheets can be squared, trimmed or slit.

We make a complete line of shears, punches and bending rolls, all sizes for hand or belt drive. Write for Catalog "S."

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## McILVAINE OIL BURNER

Listed by Underwriters

Adaptable to warm-air furnaces because the McILVAINE System of continuous flame insures no cracking or burning of fire pots, but produces even, dependable heat.

Not an Intermittent Burner

DEALERS: Write for information today.  
McILVAINE BURNER CORP., Dept. A, 747 Custer Ave., Evanston, Ill.

# Plan NOW to attend the CONVENTION of the

NATIONAL ASSOCIATION

of

SHEET METAL CONTRACTORS

June 3-4-5-6-7

Lord Baltimore Hotel • Baltimore, Md.

Cut your sheets quicker,  
easier and better with—

## MARSHALLTOWN Throatless Shears

CUTTING your sheets accurately with speed increases your profit. This No. 18 Marshalltown Hand Power Shear will pay for itself in no time at all—its cost is so low you will be surprised.



It does  
all your sheet cutting—  
every shop can use it—

This No. 18 takes sheets any size—its construction is the best made of toughest, strongest metal with blades that stand the gaff.

Covered by Patent  
No. 1020508

Write to Dept. A. A. for full details of this and other Marshalltown Sheet Metal Tools.

**MARSHALLTOWN MANUFACTURING CO.**  
MARSHALLTOWN, IOWA



## "Torrid" Tinner's Furnaces

are only made by Diener. No others are genuine. "Torrids" cost no more than others and the user gets a greater satisfaction.

**GEO. W. DIENER MFG. CO., CHICAGO**  
Makers of fine Blow Torches and Fire Pots.

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IMMEDIATE SHIPMENT FROM STOCK

More than twenty kinds of Prime quality sheets are carried in stock. There is a special sheet for every purpose. Also Bars, Angles, Rivets, Bolts, Tools and Metal-Working Machinery. Write for Journal and Stock List.

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Chicago Milwaukee Jersey City Boston Detroit St. Louis Cincinnati Cleveland Buffalo



Send for catalog today

## VIKING SHEAR

Compound LEVER Handle—Removable Blades

A child can work them

**VIKING SHEAR CO., Erie, Pa.**

When writing mention AMERICAN ARTISAN—Thank you!

# BUYERS' DIRECTORY

(Continued from page 74)

**Pipe and Fittings—Furnace.**  
Chicago Furnace Supply Co.,  
Chicago, Ill.  
Henry Furnace & Fdy. Co.,  
Cleveland, Ohio  
Lamneck Co., W. E.,  
Columbus, Ohio  
Meyer & Bro. Co., F., Peoria, Ill.  
Milwaukee Corrugating Co.,  
Mil., Ch'go, La Crosse, Kan. City  
Osborn Co., The J. M. & L. A.,  
Cleveland, Ohio

**Pipe and Fittings—Stove.**  
Meyer & Bro. Co., F., Peoria, Ill.  
Milwaukee Corrugating Co.,  
Mil., Ch'go, La Crosse, Kan. City

**Pipe—Conductor.**  
Barnes Metal Products Co.,  
Chicago, Ill.  
Berger Bros. Co.,  
Philadelphia, Pa.  
Chicago Metal Mfg. Co.,  
Chicago, Ill.  
Dieckmann Co., Ferdinand,  
Cincinnati, Ohio  
Friedley-Voshardt Co.,  
Chicago, Ill.  
Lupton's Sons Co., David,  
Philadelphia, Pa.  
Milwaukee Corrugating Co.,  
Mil., Ch'go, La Crosse, Kan. City  
New Jersey Zinc Sales Co., The  
New York, N. Y.

**Presses.**  
La Salle Machine Works,  
Chicago, Ill.

**Pipe Covering.**  
Sall Mountain Co., Chicago, Ill.

**Punches.**  
Bertsch & Co.,  
Cambridge City, Ind.  
Interstate Machinery Co.,  
Chicago, Ill.  
La Salle Machine Works,  
Chicago, Ill.  
Peck, Stow & Wilcox Co.,  
Southington, Conn.  
Ryerson & Son, Inc., Jos. T.,  
Chgo., N. Y., St. L., Det., Cleve.

**Punches—Combination Bench and Hand.**  
Hyro Mfg. Co., New York, N. Y.  
Ryerson & Son, Inc., Jos. T.,  
Chgo., N. Y., St. L., Det., Cleve.

**Punches—Hand.**  
Hyro Mfg. Co., New York, N. Y.  
Ryerson & Son, Inc., Jos. T.,  
Chgo., N. Y., St. L., Det., Cleve.

**Putty—Stove.**  
Connors Paint Mfg. Co., Wm.,  
Troy, N. Y.

**Radiator Cabinets.**  
The Hart & Cooley Mfg. Co.,  
New Britain, Conn.  
Tuttle & Bailey Mfg. Co.,  
Chicago, Ill.

**Radiators—Shields.**  
Beh & Co., Inc., New York, N. Y.

**Register Shields.**  
Beh & Co., Inc., New York, N. Y.  
Hall-Neal Furnace Co.,  
Indianapolis, Ind.

**Registers—Warm Air.**  
Auer Register Co., Cleveland, Ohio  
Forest City-Walworth Run  
Foundries Co., Cleveland, Ohio  
Hart & Cooley Co.,  
New Britain, Conn.  
Henry Furnace & Fdy. Co.,  
Cleveland, Ohio  
Independent Register & Mfg. Co.,  
Cleveland, Ohio  
Lamneck & Co., W. E.,  
Columbus, Ohio  
Meyer & Bro. Co., F., Peoria, Ill.  
Milwaukee Corrugating Co.,  
Mil., Ch'go, La Crosse, Kan. City  
Tuttle & Bailey Mfg. Co.,  
Chicago, Ill.

**Registers—Wood.**  
American Wood Register Co.,  
Plymouth, Ind.  
Auer Register Co., Cleveland, Ohio  
Milwaukee Corrugating Co.,  
Mil., Ch'go, La Crosse, Kan. City

**Regulators—Heat.**  
National Regulator Co.,  
Chicago, Ill.  
H. M. Sheer Co.,  
Chicago, Ill.

**Roofing.**  
Armco Distributors Ass'n of  
America, Middletown, Ohio  
Lupton's Sons Co., David,  
Philadelphia, Pa.  
Milwaukee Corrugating Co.,  
Mil., Ch'go, La Crosse, Kan. City

**Rivets—Stove.**  
The Kirk-Latty Co.,  
Cleveland, Ohio  
Lamson & Sessions Co.,  
Cleveland, Ohio  
Ryerson & Son, Inc., Jos. T.,  
Ch'go, N. Y., St. L., Det., Cleve.

**Rods—Stove.**  
The Kirk-Latty Co.,  
Cleveland, Ohio  
Lamson & Sessions Co.,  
Cleveland, Ohio

**Rolls—Forming.**  
Bertsch & Co.,  
Cambridge City, Ind.

**Roofing Cement.**  
Connors Paint Mfg. Co., Wm.,  
Troy, N. Y.

**Roofing Tile—Clay and Shale.**  
B. Midlin Hood Co., Daisy, Tenn.

**Roof—Flashing.**  
Milwaukee Corrugating Co.,  
Milwaukee, Wis.

**Roofing—Iron and Steel.**  
Armco Distributors Ass'n of  
America, Middletown, Ohio  
Central Alloy Steel Corp.,  
Massillon, Ohio  
Inland Steel Co., Chicago, Ill.  
Milwaukee Corrugating Co.,  
Mil., Ch'go, La Crosse, Kan. City  
Osborn Co., The J. M. & L. A.,  
Cleveland, Ohio  
Ryerson & Son, Inc., Jos. T.,  
Chgo., N. Y., St. L., Det., Cleve.

**Roofing—Tin.**  
Milwaukee Corrugating Co.,  
Mil., Ch'go, La Crosse, Kan. City  
Taylor Co., N. & G.,  
Philadelphia, Pa.

**Roofing—Zinc.**  
New Jersey Zinc Sales Co., The,  
New York, N. Y.

**Rubbish Burners.**  
Hart & Cooley Co.,  
New Britain, Conn.

**Schools—Sheet Metal Pattern Drafting.**  
St. Louis Technical Institute,  
St. Louis, Mo.

**Schools—Warm Air Heating.**  
St. Louis Technical Institute,  
St. Louis, Mo.

**Screws—Hardened Metallic Drive.**  
Milwaukee Corrugating Co.,  
Mil., Ch'go, La Crosse, Kan. City  
Parker-Kalon Corp.,  
200 Varick St., New York

**Screws—Hardened Self-Tapping, Sheet Metal.**  
Milwaukee Corrugating Co.,  
Mil., Ch'go, La Crosse, Kan. City  
Parker-Kalon Corp.,  
200 Varick St., New York

**Screens—Perforated Metal.**  
Harrington & King Perforating  
Co., Chicago, Ill.

**Shears—Hand and Power.**  
Interstate Machinery Co.,  
Chicago, Ill.  
Marshalltown Mfg. Co.,  
Marshalltown, Iowa  
Peck, Stow & Wilcox Co.,  
Southington, Conn.  
Ryerson & Son, Inc., Jos. T.,  
Ch'go, N. Y., St. L., Det., Cleve.  
Viking Shear Co., Erie, Pa.

**Sheet Metal Screws—Hardened, Self-Tapping.**  
Parker-Kalon Corp.,  
200 Varick St., New York

**Sheets—Black and Galvanized.**  
Armco Distributors Ass'n of  
America, Middletown, Ohio  
Central Alloy Steel Corp.,  
Massillon, Ohio  
Inland Steel Co., Chicago, Ill.  
Milwaukee Corrugating Co.,  
Mil., Ch'go, La Crosse, Kan. City  
Osborn Co., The J. M. & L. A.,  
Cleveland, Ohio  
Ryerson & Son, Inc., Jos. T.,  
Ch'go, N. Y., St. L., Det., Cleve.  
Taylor Co., N. & G.,  
Philadelphia, Pa.

**Sheets—Iron.**  
Armco Distributors Ass'n of  
America, Middletown, Ohio  
Central Alloy Steel Corp.,  
Massillon, Ohio  
Milwaukee Corrugating Co.,  
Mil., Ch'go, La Crosse, Kan. City  
Ryerson & Son, Inc., Jos. T.,  
Chgo., N. Y., St. L., Det., Cleve.

**Sheets—Tin.**  
Taylor Co., N. & G.,  
Philadelphia, Pa.

**Sheets—Zinc.**  
New Jersey Zinc Sales Co., The,  
New York, N. Y.

**Shingles and Tiles—Metal.**  
Milwaukee Corrugating Co.,  
Mil., Ch'go, La Crosse, Kan. City

**Sifters—Ash.**  
Diener Mfg. Co., G. W.,  
Chicago, Ill.

**Sky Lights.**  
Lupton's Sons Co., David,  
Philadelphia, Pa.  
Milwaukee Corrugating Co.,  
Mil., Ch'go, La Crosse, Kan. City

**Snips.**  
Peck, Stow & Wilcox Co.,  
Southington, Conn.  
Ryerson & Son, Inc., Jos. T.,  
Chgo., N. Y., St. L., Det., Cleve.

**Solder.**  
Kester Solder Co., Chicago, Ill.  
Milwaukee Corrugating Co.,  
Mil., Ch'go, La Crosse, Kan. City

**Soldering Furnaces.**  
Burgess Soldering Furnace Co.,  
Columbus, Ohio  
Diener Mfg. Co., G. W.,  
Chicago, Ill.  
Ryerson & Son, Inc., Jos. T.,  
Chgo., N. Y., St. L., Det., Cleve.  
**Soldering Supplies.**  
Kester Solder Co., Chicago, Ill.

**Specialties—Hardware.**  
Diener Mfg. Co., G. W.,  
Chicago, Ill.

**Stars—Hard Iron Cleaning.**  
Fanner Mfg. Co., Cleveland, Ohio

**Statuary.**  
Friedley-Voshardt Co.,  
Chicago, Ill.  
Gerock Bros. Mfg. Co.,  
St. Louis, Mo.

**Steel Pipe—Welded.**  
Chicago Metal Mfg. Co.,  
Chicago, Ill.

**Stove Pipe Reducers.**  
Milwaukee Corrugating Co.,  
Mil., Ch'go, La Crosse, Kan. City

**Tinplate.**  
Milwaukee Corrugating Co.,  
Mil., Ch'go, La Crosse, Kan. City  
Osborn Co., The J. M. & L. A.,  
Cleveland, Ohio  
Taylor Co., N. & G.,  
Philadelphia, Pa.

**Tools—Tinsmith's.**  
Bertsch & Co.,  
Cambridge City, Ind.  
Dries & Krump Mfg. Co.,  
Chicago, Ill.  
Hyro Mfg. Co., New York, N. Y.  
Interstate Machinery Co.,  
Chicago, Ill.  
Maplewood Machinery Co.,  
Chicago, Ill.  
Osborn Co., The J. M. & L. A.,  
Cleveland, Ohio  
Peck, Stow & Wilcox Co.,  
Southington, Conn.  
Ryerson & Son, Inc., Jos. T.,  
Chgo., N. Y., St. L., Det., Cleve.  
Viking Shear Co., Erie, Pa.

**Torches.**  
Burgess Soldering Furnace Co.,  
Columbus, Ohio  
Diener Mfg. Co., G. W.,  
Chicago, Ill.  
Ryerson & Son, Inc., Jos. T.,  
Chgo., N. Y., St. L., Det., Cleve.

**Trade Extension.**  
American Zinc Institute,  
New York, N. Y.  
Copper & Brass Research As-  
sociation, New York, N. Y.  
Sheet Steel Trade Extension  
Committee, Pittsburgh, Pa.

**Trimmings—Stove.**  
Fanner Mfg. Co., Cleveland, Ohio

**Vacuum Cleaner—Furnace.**  
Brillion Furnace Co., Brillion, Wis.  
Gottschalk Heating Co.,  
Covington, Ky.  
National Super Service Co.,  
Toledo, Ohio

**Ventilators.**  
Aeolus Dickinson Co., Chicago, Ill.  
Akrot Ventilators, Inc.,  
Chicago, Ill.  
Arex Company, Chicago, Ill.  
Berger Bros. Co.,  
Philadelphia, Pa.  
Friedley-Voshardt Co.,  
Chicago, Ill.  
Kernchen Co., Chicago, Ill.  
Lupton's Sons Co., David,  
Philadelphia, Pa.  
Milwaukee Corrugating Co.,  
Mil., Ch'go, La Crosse, Kan. City  
Standard Ventilator Co.,  
Lewisburg, Pa.

**Ventilators—Ceiling.**  
Hart & Cooley Co.,  
New Britain, Conn.  
Henry Furnace & Fdy. Co.,  
Cleveland, Ohio

**Windows—Steel.**  
Lupton's Sons Co., David,  
Philadelphia, Pa.

**Zinc.**  
American Zinc Institute,  
New York, N. Y.  
New Jersey Zinc Co., The,  
New York, N. Y.

Say you saw it in AMERICAN ARTISAN—Thank you!



## WANTS AND SALES

Yearly subscribers to the **AMERICAN ARTISAN** may insert advertisements of not more than fifty words in our Want and Sales Columns **WITHOUT CHARGE**.

Such advertisements, however, must be limited to help or situation wanted, tools or equipment for sale, to exchange or to buy, business for sale or location desired and must reach our office by Thursday of the week of publication. This privilege is not extended to manufacturers or jobbers—or those making a business of buying and selling used machines—employment agencies and brokers.

When sending advertisement state whether your name or blind number is to be used.

## BUSINESS CHANCES

**Lightning Rods**—Dealers who are selling Lightning Protection will make money by writing to us for our latest Factory to Dealer Prices. We employ no salesmen and save you all overhead charges. Our Pure Copper Cable and Fixtures are endorsed by the National Board of Fire Underwriters and hundreds of dealers. Write today for samples and prices. L. K. Diddle Company, Marshfield, Wis.

**For Sale**—Plumbing, Heating and Sheet Metal Shop, established 25 years in one of the best towns of 1,000 population in N. E. Nebraska, doing a nice business, good territory, good prospects. Will sell stock and tools and building if wanted. Priced right. Am obliged to sell on account of failing health. Building is of concrete construction, full basement, hot water heat, 25x50. A good chance for a good man. Address Y-499, **AMERICAN ARTISAN**, 139 North Clark Street, Chicago, Illinois.

**For Sale**—Sheet metal shop in Houston, Tex. Shop 24x30, with store room. Tools, including 8 foot brake with all necessary hand tools for general sheet metal work—also welding torch complete. Good amount of Marine work. Ideal location and a good chance for a good man. Will sacrifice tools complete and stock for \$500.00 and give 3 year lease at \$40.00 per month. A splendid opportunity for any man. Address F-499, **AMERICAN ARTISAN**, 139 N. Clark St., Chicago, Ill.

**For Sale**—Well equipped sheet metal and furnace business in good progressive city in Southern Illinois. Good chance for young man to get a well established business. Will sell on account of old age and sickness. For information write or call Mt. Vernon Sheet Metal Works, 111 North Eleventh Street, Mt. Vernon, Illinois. Phone 426-W. Z-499

**For Sale or Exchange**—General sheet metal, furnace and roofing business located on west side of Chicago. Great chance for mechanic who wants to get ahead. Established 27 years, fully equipped, ideal location. Will sell at a bargain and assist buyer to get started. Wish to retire on account of age and health. Address E-499, **AMERICAN ARTISAN**, 139 N. Clark St., Chicago, Ill.

**Growing sheet metal shop in Portland, Oregon**, wants experienced man to invest \$3,000 or more, with services. Blow pipe, furnace, and general sheet metal work. Practical mechanic or estimator and superintendent wanted. Address R-498, **AMERICAN ARTISAN**, 139 North Clark Street, Chicago, Illinois.

## BUSINESS CHANCES

**Wanted to Buy**—Good sheet metal shop in Kansas or Oklahoma. I will also consider a partner. Address A-500, **AMERICAN ARTISAN**, 139 N. Clark St., Chicago, Ill.

## SITUATION WANTED

**Experienced furnace salesman** will be open May 1st for position; thoroughly familiar with Standard Code; can help dealers on installation. Special attention given to school and church jobs. Acquainted with most of the best dealers in Wisconsin. Furnish best of references. Address 745 47th street, Milwaukee, Wisconsin. P-498

**Situation Wanted**—By sheet metal worker and furnace installer. Do plumbing. Twenty years' experience in job shop and factory doing eave, trough, gutter, roofing, traveling installer, and trouble shooting. Neat and fast workman. Can come at once. Address X-499, care **AMERICAN ARTISAN**, 139 North Clark Street, Chicago, Illinois.

**Situation Wanted**—First class tinner, furnace man, and pattern cutter wants position. Also up on technical end. For further particulars write stating wages and hours with full particulars. Address W-499, care **AMERICAN ARTISAN**, 139 North Clark Street, Chicago, Illinois.

**Situation wanted by tinner and furnace man and general handy man** around country hardware store. Can also do pump work and some plumbing. Address 616 Manomin Avenue, St. Paul, Minnesota. O-498

**A first class hardware man**, capable of taking charge and running the business, seeks position with a reliable company. Address G. O. Crouch & Son, Chattanooga, Tennessee. M-498

**Situation Wanted by Sheet Metal Worker and Furnace Man**. Years of experience. Iowa preferred. Address B-500, care **AMERICAN ARTISAN**, 139 North Clark Street, Chicago, Illinois.

## HELP WANTED

**Wanted**—First class sheet metal worker, accustomed to the general run of sheet metal work, such as factory, heating and ventilating, cornice work. State qualifications, wages expected, also references, and when available. Steady work the year round to first class mechanic. Address T-499, **AMERICAN ARTISAN**, 139 North Clark Street, Chicago, Illinois.

**Wanted**—An all around first class tinner who can work out his own plans and do all work connected with a tin shop. Some furnace work. Must be reliable and sober at all times. Address Z-498, **AMERICAN ARTISAN**, 139 N. Clark St., Chicago, Illinois.

**Wanted at Once**—All around man to do class of work that comes in a country tin shop. Must be able to do plumbing and drive a car. Want a sober man and one who will be on the job. Wages \$30.00 week, year around. Address O. L. Doward, Mt. Morris, Illinois. T-498

**Wanted**—Experienced salesman with car to sell Genasco roofing. Large territory, liberal commission. Address L. R. Hamman Roofing and Sheet Metal Works, 507-511 E. Prairie St., Decatur, Ill. Y-498

**Wanted**—Furnace salesman by Midwestern jobber. Must be familiar with the code and fan practice. Address A-499, **AMERICAN ARTISAN**, 139 N. Clark St., Chicago, Ill.

**Wanted at Once**—All around sheet metal worker, reliable, age between 30 and 45. Address O-498, **AMERICAN ARTISAN**, 139 North Clark Street, Chicago, Illinois.

## HELP WANTED

**Wanted**—Combination sheet metal worker and plumber. In a good live modern town of 3,000 inhabitants. Splendid schools. Year round position for a man that wants that kind of a place. Want a man that can run a shop, figure heating of all kinds. Address R-499, care **AMERICAN ARTISAN**, 139 North Clark Street, Chicago, Illinois.

**Wanted**—Tinner and handy man. Must be able to drive car, put a bottom in a washboiler and also do guttering and spouting. Steady work with two furnished rooms included. Address S-499, care **AMERICAN ARTISAN**, 139 North Clark Street, Chicago, Illinois.

**Wanted**—Skilled workman who has had experience in the manufacture of steam tables and all kinds of kitchen equipment; good position. Address S-498, **AMERICAN ARTISAN**, 139 North Clark Street, Chicago, Illinois.

**Wanted**—Combination sheet metal worker and plumber. Prefer man who is experienced in furnace work, gutter and general repair work who can also do some plumbing. Address Hinckley Hardware Company, Hinckley, Illinois. W-498

**Wanted**—Combination furnace man and plumber. Must be good on furnace work. Address James B. Crowley, 120 South Fred Avenue, Oelwein, Iowa. P-499

## TINNERS' TOOLS

**For Sale**—1 small turning machine, also large one, burring, wire and setting down machine, small beader with 5 sets of rolls, 20-inch bar folder, 17-inch groover, 30-inch square shear, 2x31-inch rollers, 8-foot Chicago steel brake. All for \$195 f. o. b. Grand Rapids, Michigan. Address Albert Zylstra, 1233 Muskegon Avenue, N. W. Grand Rapids, Michigan. K-498

**For Sale**—Full set of tinner's tools, including 8-foot steel brake, 30-inch bar folder, 30-inch square shear, 30-inch rolls, groover, crimper, burring, wire, thick-edge. All machines with standards and in good condition. A bargain if taken at once. Address L-498, **AMERICAN ARTISAN**, 139 North Clark Street, Chicago, Illinois.

**Wanted**—One 30-inch or 36-inch squaring shear. One 36-inch roll. Want second hand shears and roll but they must be in good condition. Cheapest price and cash. Address D-499, **AMERICAN ARTISAN**, 139 N. Clark St., Chicago, Illinois.

**Wanted**—Riveting machine that will handle 14 gauge corrugated culverts and lighter; must be in first class condition. Address Wendland Sheet Metal Works, 30 West Concha Avenue, San Angelo, Texas. H-498

**For Sale**—Complete set of tinner's tools, including 8-foot Chicago Brake 30-inch Square Shears, 36-inch Bar Folder. Good location for shop in new oil town. Address C. McEntarfer, Valley Center, Kansas. J-498

**Wanted**—Set of Slip Rolls. 2½ or 3" rolls 36 or 42 inches in length. Let us hear from you. Address H. J. Gribble, 908 Walnut Street, Columbia, Missouri. M-499

## MISCELLANEOUS

**For Sale**—Metal building construction. This is an innovation and it will pay you to investigate. Address G-499, **AMERICAN ARTISAN**, 139 N. Clark St., Chicago, Ill.

**For Sale**—Sturtevant Vacuum Cleaner used one season. Good as new. Cost \$250.00. First \$125.00 takes it. Address Service Plumbing and Heating Shop, Fremont, Michigan. H-499

**For Sale**—One Delco lighting plant. Address Edward Lloyd, Route 2, White-water, Wisconsin.

## BOOKS

**Manual of Automotive Radiator Construction and Repair**, by F. L. Curfman and T. H. Leet—Anyone interested in Radiator Repairing will find the 185 pages of practical instructions and the 120 illustrations showing actual construction and repairing a big help. In a condensed manner some four to five thousand answers to questions are given. It is thoroughly practical as both authors are men of wide experience in this work. Printed in large, easy to read type. Measures 5½x9 inches. Price \$2.50. Order from book Dept., AMERICAN ARTISAN, 139 North Clark Street, Chicago, Illinois.

**Exhaust and Blow Piping**, by Hayes—Exhaust and Blow Piping has had an unusually big demand. A fresh supply is now off the press and is in our hands for immediate delivery. It has an invaluable treatise on the planning, cost, estimation and installation of fan piping in all its branches giving all necessary guidance in fan work blower and separator construction. 159 pages, 5x8. 51 figures. Cloth, \$2.00. Order from Book Dept., AMERICAN ARTISAN, 139 North Clark Street, Chicago, Illinois.

## Too Good To Miss!

8" Robinson Brake.....	\$50.00
8" Double Truss Brake.....	50.00
36" 16-Ga. Shear.....	75.00
30 USED BURRING, TURNING, BEADING, CRIMPING MA- CHINES, each.....	10.00
24 USED STAKES at fraction of new cost.	
30" Bar Folders.....	35.00
Stock Shears, each.....	4.50

IMMEDIATE SHIPMENT

**Interstate Machinery Company**  
601 W. Monroe St. Chicago, Ill.



Pat.  
Applied  
For

**TEST ITS PULLING POWER  
AND NOTICE ITS EFFICIENCY—**

A quality product, simple in  
design and accurate in detail.

Write for Information and Prices.

**AKRAT VENTILATORS, INC.**  
1191 Builders Bldg. CHICAGO

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your name or blind number is to be  
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desired.

## PATENTS

HUBERT E. PECK  
Patent Attorney  
Barrister Bldg., WASHINGTON, D. C.

## WANTED

Salesman calling on the furniture and hardware trade to sell our line of Leader Parlor Furnaces in Central and Western territory. Give experience and references. Address Southern Stove Works, Evansville, Ind. K499

## WANTED

Salesman for Northern Illinois territory. One who knows stoves and furnaces and the stove trade in Northern Illinois and Eastern Iowa. Complete line of enameled circulators, warm air furnaces, laundry tank heaters, and enameled gas ranges, high quality merchandise. Only those need apply who are capable of producing. Address L499, American Artisan, 139 N. Clark St., Chicago, Ill.

## SPECIAL NOTICE

## I AM OPEN

for position as furnace salesman in Wisconsin. Know every dealer in State, and records prove I can sell furnaces. Address J. Bon Durant, Dodgeville, Wisconsin. J499

**"Sheer Comfort"**  
Automatic Electric  
**HEAT CONTROL**

**Consumer's Price**  
**\$48.00**  
**Installed**

**H. M. SHEER COMPANY**  
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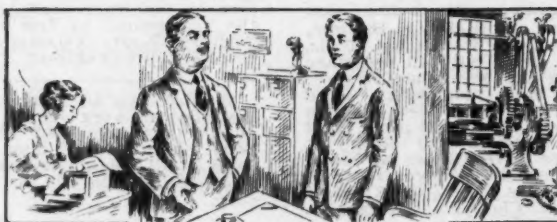
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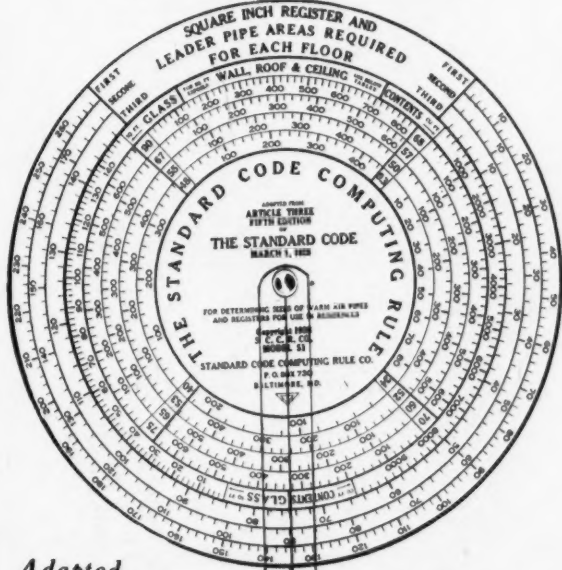
Our Coaching work, whether you believe it or not—it works just the same. We Coach you in your own Home, Personal, Clear, Direct. Full information mailed free on request. Check your choice subject.

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**THE ST. LOUIS TECHNICAL INSTITUTE** O. W. KOTHE, Pres. 4543 Clayton Ave., St. Louis, Mo.



## The STANDARD CODE Computing Rule



Adapted  
from Article Three 5th Edition

of the  
**STANDARD CODE**

MARCH 1, 1928

*Simple to Operate*

THE Computing Rule is not a novelty, but, a well designed mathematical device, for figuring leader pipe and register areas for warm air heating systems. It has proven its accuracy in estimating and has passed the experimental stage. It is operated similar to an Engineer's slide rule.

The complete instructions are easily understood. You can learn to operate the Rule in less than one hour.

Results can be had without a single Division, Multiplication or Addition problem, as required in Article Three of the Standard Code. Not a chance for a mathematical error.

"Remember, you do not have to refer to a lot of loose parts or awkward tables."

Simplifies accurate estimating.

### Handy Pocket Size

**R**ULES are  $5\frac{1}{2}$  inches in diameter— $\frac{1}{8}$  inch thick. Has an upper and lower revolving disc with a hairline indicating arm.

It is made of extra heavy and specially prepared celluloid, which reduces shrinkage and warping to a minimum. It is washable and unbreakable.

Can be carried comfortably in your pocket.

Here Is What The Computing Rule Will Determine:

- 1 The warm air pipe and register areas for First, Second and Third floor rooms.
- 2 The areas necessary for 70° inside temperature when the outside temperatures are ZERO, 10, 20 and 30 degrees ABOVE or BELOW zero.
- 3 The areas from the Contents, Glass, Wall, Roof and Ceiling. The factors as covered in Table "A" are represented in accurate form.
- 4 The areas for rooms having One, One and One-half and Two air changes per hour.
- 5 The Unusual Exposure requirements as the 10% for East and West and 15% for Northeast, North and Northwest rooms.

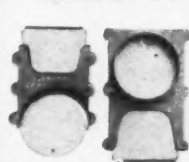
*"Absolute Correct Results"*

**Price, \$3.00—Postpaid**

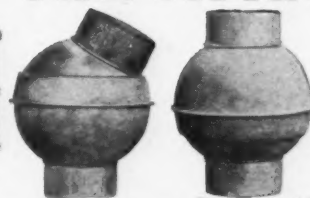
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620 South Michigan Avenue  
CHICAGO, ILLINOIS

## BLOW PIPE FITTINGS



Gates from  
2" to 18"



BALL  
JOINTS  
FROM  
2"  
TO  
12"

**U**SE Blast Gates on all your Blow Pipe Jobs. They will reduce power and increase suction if gates are closed on machines not in operation.

Spun out of heavy sheet steel and then galvanized.

USE BALL JOINTS ON MOVABLE CUTTER HEAD CONNECTIONS

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B.B. LINE OF SHEET METAL  
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CARRIED IN STOCK BY YOUR NEAREST JOBBER  
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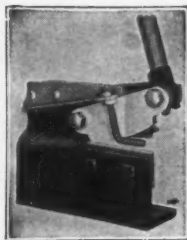
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Capacity 10 gauge sheets

Any Length or Width

Flat Bars 3/16x2"

Weight 22 pounds

**Price \$15.00 Net**

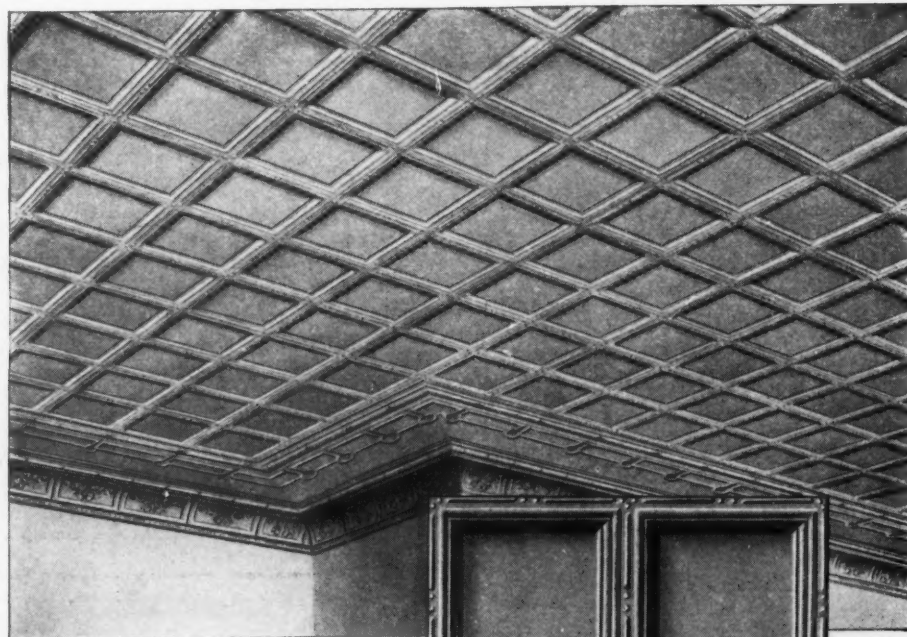
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Made of pressed steel and equipped with hold-down. Blades of highest grade crucible steel. Most indispensable high grade shears made. Equal to other shears selling at over twice the price. **ORDER YOURS TODAY.**

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"Perfect-Fit"  
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ELLER'S "Perfect-Fit" Steel Ceilings provide many entirely new ideas in artistic design. They are dignified and simple in pattern and harmonize with architectural or period effects. They are fire-safe and sanitary . . yet economical.



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